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## Something Is Wrong With Honey

By Natt N. Dodge

MESSRS. HULL AND BOHNE, in their discussions of the virtues and shortcomings of honey in the March and April issues of the American Bee Journal, have opened up a subject that is worth considerable consideration. Mr. Hull believes that, if we are to market honey in a modern manner and compete with sugar, we must standardize our product, grade out such flavors as are peculiar or produced in small quantities, and pack our product under a few nationally distributed and advertised brands of year-round uniformity of flavor and color. Mr. Bohne, on the other hand, feels that honey should not stoop to compete with sugar, for its very charm and appeal lie in its variation. He believes that each particular flavor should be packed and advertised under a specific brand, and marketed on the strength of its own special flavor characteristic. Mr. Hull is for mass distribution; Mr. Bohne for limited sales organizations.

Now that we have broken through the Hull and reached the Bone of the discussion, we may best analyze the two points of view by assuming that a family of children is being raised in Chicago. Mr. Bohne's plan of honey marketing is in operation. These children eat lots of honey—basswood honey—and how they like it! But one by one they go out into the world for themselves. John goes to California, Mary to Massachusetts, Peter to Texas, Genevieve to Oregon, and Alfred to Florida. Each buys some honey, but blah! It doesn't taste a bit like that good old basswood honey on which the family was raised. John persuades his grocer to send back to Chicago for a case of basswood honey, but no sooner has it arrived than another customer insists that the grocer get some of that fine buckwheat honey, such as he used to have in Pennsylvania, while a third customer is equally determined to secure some fireweed honey from the Northwest, where he was reared.

The grocer cannot please all of his customers without filling his store with various honeys, shipped at great expense from several parts of the country. Because these customers think of honey in terms of the flavor with which they were familiar as children, they long for the honey of their youth and use the local product sparingly. It just doesn't taste right. They get away from the habit of using honey, except at such times as they can get some shipped in from their home localities, and for this they are willing to pay a fancy price (most of which goes to the express company). In a word, Mr. Bohne's plan is one which would make honey a luxury, while Mr. Hull's is one which would go a long way toward placing honey on a par with other everyday foods. Under his plan, John, Mary, Peter, Genevieve, and Alfred would each be able to get the same brand of honey on which they were reared from the grocer in the locality in which each settled. This system of grading out odd flavors and distributing standard brands of uniform flavor is exactly what one or two of the large honey producers' marketing organizations are trying to establish at the present time.

But both Mr. Hull and Mr. Bohne are overlooking the most important shortcoming of honey, for there IS something the matter with honey, and this "something" must be overcome before honey, as we know it, will ever become popular with Mrs. Housewife. It must be made CONVENIENT. Honey is runny, sticky, and stringy. It resists the law of gravity, and delights in getting into all sorts of places where it isn't wanted. It will neither stay on a spoon nor permit itself to be entirely removed. The part that is undecided compromises by settling on the tablecloth. It runs down the side of the pail in which it is brought home, firmly fastening this container to the cupboard shelf. It adheres to the inside of the cover

to be distributed over Mrs. Housewife's fingers and liberally plastered over whatever object the cover is laid upon. If placed on the table in a glass, its first act is to swallow the spoon clear to the handle. It won't "stay put" on the plate, either sneaking under the slice of bread or else feeling its way out into the gravy and mashed potato. If spread on bread, it goes on a tour of exploration and either falls through a hole or drops over the edge on a thread of its own spinning. (After reaching the tablecloth, it discards the thread on Johnny's new necktie.) A few drops, not otherwise accounted for, may be found on the floor or on a chair. Those on the chair usually are not discovered until someone tries to get up. Can you blame Mrs. Housewife for muttering a few quiet words which she would not wish either her husband or the children to hear, and (after the tablecloth and napkins are washed and the chairs and floor cleaned up) emphatically declaring that the next time she serves honey, she won't?

Until convenient containers for keeping and serving honey are devised and popularized, honey for table and kitchen use cannot be expected to be generally approved and accepted, at least not as long as we have an abundance of sugar, which is cheaper, standard in weight, cleanliness and flavor, and oh, so very, very much more convenient.

(We use honey at the table all the time, in the granulated form, and it is not standardized either, for we have so large a quantity of clover honey that it would not be advisable to mix such inferior honey as buckwheat with it. Standardizing honey is all right for the wholesaler who gets some from every direction. But the average honey consumer prefers the honey of his locality. What we need is to get the people accustomed to honey, to its varieties, its granulation, etc.—C. P. Dadant.)

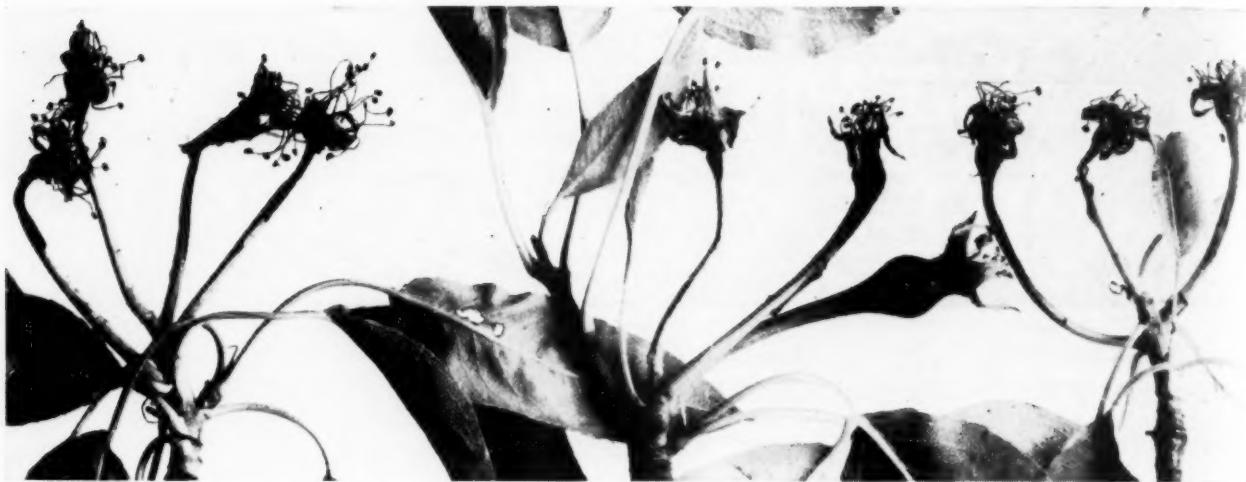


Fig. 1. Winter Nelis pear blossoms showing first spring infections. Photographed April 16, 1929, at Fayetteville, Arkansas. Note the healthy appearance of the foliage in contrast to the blossoms, which are all blighted except one near the center, and note also that most of the blighted blossoms show the dead, discolored tissue only in the upper parts, indicating the start of the disease in or near the cup of the flower.

## Is the Honeybee Responsible for the Spread of the Fireblight Germs?

### II. The Work of the Arkansas Agricultural Experiment Station

By Dr. H. R. Rosen, University of Arkansas

IN the former article, which appeared in the May number of the American Bee Journal, an attempt was made to present a summary of the more important recent investigations concerning the agents involved in the spread of fireblight. It was particularly pointed out that aphids are not commonly involved in early spring infections or in later ones. It was also shown that as far as the honeybee is concerned no proof had been presented in the past indicating that these insects are involved in initiating primary infections, although it has been abundantly shown that they are capable of acting as important disseminators of secondary ones.

In view of the fact that fireblight of pears and apples is not being controlled adequately at present, a very thorough investigation of this disease has been undertaken at the Arkansas Agricultural Experiment Station, under the writer's direction, and a number of facts have been brought to light, some of which are in considerable conflict with prevailing ideas. One of the lines of study consisted in determining the kinds of plants that may possibly be involved in carrying the germ through the winter, and another line consisted in attempting to find out how the germs are spread. It was pointed out in the previous article that the common notion concerning the way in which the germs overwinter is that they remain alive on the trees in "holdover" cankers, that they ooze out in the early spring and that this ooze when dis-

There has long been a controversy as to whether the honeybee is responsible for the spread of fireblight. Dr. Rosen here presents his opinion that she is. Other observers disagree with the doctor and contend that other agencies distribute the organism. The subject is far from settled and the American Bee Journal opens its columns to the discussion in the hope of bringing out all the facts.

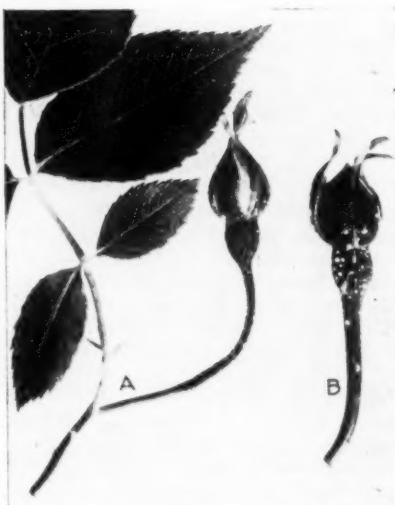


Fig. 2. Bacterial ooze appearing on the blighted parts of rose buds which were artificially inoculated with fireblight germs. That the rose is subject to fireblight is a new discovery.

seminated by insects, as formerly supposed, or by rain and wind, as is now held by some pathologists, is responsible for the first spring blight. One would suppose, judging by the frequency with which ooze or exudate is mentioned as having been seen in the early spring by numerous investigators, that this bacterial extrusion in the form of ooze is one of the commonest phenomena associated with the season's first blight.

Now, with the hundreds of infections that the writer has produced in a greenhouse, where over one hundred growing pear trees have been maintained throughout the year, ranging over a number of years, and with the thousands of natural infections that the writer has observed in the orchards, he has had very ample opportunity to become thoroughly acquainted with the appearance of bacterial ooze, including the running, watery stage, as well as with the gummy drops. But the curious fact is that in spite of a most diligent search for it, including daily observations of hundreds of marked cankers on both pears and apples, beginning early in February and extending up to the first signs of blight, ranging over a five-year period, ooze which contains infectious, disease-producing germs has yet to be found. As the sap begins to rise in the early spring there is likely to be a flow of gum, ooze or sap flow from variously injured areas and there is no difficulty in finding at times such exudations at or near blight cankers. But in

every instance where we have attempted to culture the germ from such early spring ooze, or when we have attempted to produce infections on vigorous pear sprouts with the ooze itself, we have failed to obtain infections. On the other hand, no difficulty whatever has been experienced in obtaining abundant infections with the ooze that appears from freshly blighted tissues; likewise, we have experienced no difficulty in finding considerable ooze once the blight was established. We therefore feel justified in concluding that, as far as concerns Ozark climatic conditions and the varieties grown here, early spring oozing from overwintered cankers has little or nothing to do with the first blight infections.

Where, then, does the earliest spring blight come from?

Aside from the overwintering of the fireblight germ on the trees themselves, there are several other possibilities, and we are at present spending a great deal of time investigating these. One of these, however, has given us such outstanding results that it is here presented, even though the investigations are not complete. It concerns the honeybee.

Every year since these studies were undertaken it was found that the blossoms were, with rare exceptions, the first organs to succumb to blight. Now, the writer and other investigators have found that when a water suspension of blight bacteria is applied to young leaves of pears or apples the bacteria can readily enter these organs and produce typical blight without the aid of any insects. This, of course, suggests that when these germs are present on a tree, and a rain comes along, they can readily be spattered on susceptible tissues, which in the early spring would consist of young leaves as well as flowers. Why, then, were the earliest infections nearly always to be found only on the flowers? Does this not suggest that some agent was involved in scattering the germ, whose visitations are largely confined to the blossoms? As the honeybee is the most important and the commonest nectar- and pollen-gathering agent in our section of the country, we naturally started searching the beehive.

Our first effort was to locate hives in an orchard where susceptible apples are grown and where considerable blight was present. Then, with the kind cooperation of the grower, we proceeded to take samples of comb and honey, pollen, and brood cells throughout the summer, winter and early spring. Realizing, from the beginning, that if any large portion of the materials within hives were infested with fireblight germs there would very likely not be a susceptible apple or pear tree remaining, we took many samples of material

## Talk About the Ostrich Sticking Its Head in the Sand—Why *the* Race of Bees?

By F. B. Paddock

THE discussion about the best race of bees is very interesting. It reminds me of the period when arguments appeared for and against equipment. Is there any size or type of equipment which is superior under any and all conditions?

The fallacy of the discussion is that these arguments overshadow the fundamentals of bee behavior. Just last week the question was asked, "Will the big hive control swarming?" No! Swarming is the fundamental biological principle of reproduction—something which cannot be rubbed out.

Now about races. There is no best race. That's just why there is interest developing in the use of some race other than the Italian. In the many favorable comments on other races it does not mean that the Italian is all wrong.

It is strange, indeed, as we look

from various parts of each hive and tried out a number of different techniques in attempt to find the germ within the hives. Briefly, we were able to isolate and to obtain pure cultures of this pest from such samples taken throughout the year, including the early spring before the bees became active outside of the hive and before any blight developed. We were also able to isolate the germ from the new brood of bees in the early spring. In every instance where there were unmistakable signs of pure culture isolations, we inoculated healthy pear shoots on trees maintained in a greenhouse, and in no case was the evidence considered worth while unless typical fireblight was produced in these inoculations.

As far as the hives with which we worked are concerned, there can be no question that they harbored the fireblight germs and that some of the newly bred spring bees within these hives were infested. Will this explain how the blossoms get the germs in the early spring? We are now engaged in experimental work attempting to answer this question more definitely. In the meantime, if we find that our assumptions are correct, what can the fruit grower and beekeeper do? First, it is very obvious that he must get rid of infested hives; second, as a matter of self-protection, he must maintain his own stand of germ-free bees and not depend on his neighbor's or on wild bees that may be infested. As far as the varieties of apples grown in the Ozarks are concerned, the honeybee appears to be indispensable for the proper setting of fruit.

back over the last fifty years, to find how and why our present situation has developed. Beekeepers are working with one of the most interesting creatures of nature, yet they act in a most peculiar manner. The alibi which a beekeeper will develop for doing a certain thing is most amusing.

Why did the Italian race become the race for producing in the United States? Talk about the ostrich sticking its head in the sand to hide! What are producers doing?

Give the Italian bee everything that is claimed for it and there is no reason why it should be the race for the United States. The United States covers too much territory with too many conditions for the race.

Are all the eggs produced by Leghorns? Is all the milk produced by Jerseys? Are all the potatoes grown Cobblers? Are all the apples produced Greenings? Is it not true that in man's association with all other forms of plant and animal life there are adaptations for special service?

Why should honey producers throughout the length and breadth of the land, from tropic to arctic, from sea level to one and a half miles high, from wet to arid, use only one race of bees?

Let the producers pull their heads out of the sand. Maybe there are conditions which will be met by a race known to be exceptionally hardy, that does not rob, that does have a longer tongue and is known in its native land as a red clover pollinator. Why is it necessary to let some possible disadvantages keep one from profiting by advantages?

And, further, all of the ills of honey production are not going to be cured by the race or even by a race, but by the knowledge of the producer which is effectively applied to the problem.

## Corrections in Braithwaite "Top Entrance" Article in June

The following corrections should have been made in the article mentioned: Where it reads, "Supporters claimed the bees needed no attention in the spring," should have read, "Supporters claimed that after being set up in the spring the bees needed no further attention all season."

The words, "Avoid having neighbors of children bother them," should have read, "Neighbors or children bothered by them."

If you read the article over again, read it with these corrections in mind.



## Bees and Fireblight

As we expected, there is serious objection on the part of some of our readers to the conclusions of Doctor Rosen in his articles on bees and fireblight. The Doctor has been given wide publicity in the fruit magazines and the general press. His position in the experiment station of Arkansas, where fruit growing is of major importance, entitles him to be heard. In giving Doctor Rosen a chance to state his case to the beekeepers, we do so with the hope that if he is wrong some authority will come forward prepared to challenge his position. If he is right, there is nothing to be gained by suppression of the facts.

Other observers question the source of the infection as coming from the hive.

Until the facts are definitely established and the real truth becomes known, this subject will continue to agitate the beekeepers and fruit growers alike.

It is interesting to note the following in the report of the California Experiment Station recently published: "A field survey of insects associated with a recent severe outbreak of pear blight, made by L. M. Smith, failed to show any correlation between the distribution of blight and any particular species of insects."

## Freight Rates

The railroads are asking for a 15 per cent increase in freight rates. Coming at a time when prices are falling, this will meet with little favor on the part of the shippers. Already pipe lines and trucks have taken away a large part of the freight business. Higher rates will still further reduce the volume.

Higher freight rates will leave that much less for the shipper after he has paid the expense of moving his product to market. Freight rates are already as high as conditions will justify, and it is up to the railroads to find some means of reducing their cost of operation just as other business must do when business slumps.

The beekeeper is in no mood to pay more to get his honey to market when the price is so much below former levels. Any increase in rates must fall heavily on the farming interests, which have already been so seriously deflated.

We realize that the railroads are in a hard position with heavy taxes to pay and competing with buses which operate on the public highway. The railroads deserve consideration, but higher freight rates look to us like a mistake.

## Extracting Honey

Some beginners imagine that the extraction of honey is a very big job and that they must have an expensive set of machinery to do the work. You may, of course, have an engine to run the extractor, and a pump to transfer the honey to a tank or to some sort of receptacle. But we do not believe in a honey pump. We think it puts too much air in the honey and helps it to ferment. Better have the honey extracted on an upper floor and let it run down by gravity to the tank or receptacle which is to contain it until it is put up for retail.

Honey should not be extracted until the crop is fairly over, or at least most of it has been sealed by the bees. It is not necessary that it should be all sealed if none of it has been in the hive for less than a week, for by that time it is surely ripe. Sometimes the bees seal the honey before it is ripe, and in such cases there is danger of fermentation unless it is heated a little to evaporate the extra moisture.

If your supers are of convenient size and well filled, the work of extracting will be quick. If you have escape boards, put them on the hives in the afternoon previous

to extracting. A puff of smoke, then loosen the supers from the brood chamber and slip the escape board between the two. Be sure that there is no outside crevice in the supers, for after the bees leave them it would be easy for robbers to remove the honey.

We prefer to work without bee escapes, as the combs are likely to get cold after the bees leave them. However, if the weather is hot, there will be no disadvantage in this. Some beekeepers take off the supers over the entire apiary before beginning to extract, piling them in the honey house. Then they sometimes find it necessary to warm up the honey house so the combs will not be cold and the honey sluggish. We prefer to remove the supers and extract them as fast as they are removed. If there is a crop on still, we can place them back on the hives as fast as we extract. But if there is no crop on, we find that it is necessary to keep them away from the hives until evening, when they are all put back at the same time. It is quite important not to excite the bees by the exposure of honey.

We have extracted the honey of eighty colonies, some 8,000 to 10,000 pounds, in three days, and at the end of the third day found some of the first extracted supers already well refilled, during an extra good honeyflow.

In a dearth of honey, it is well to take extra care not to cause robbing. It is at this time that the combs should be kept well covered with "robber cloths" while carrying them from the apiary to the honey house and vice versa. An ounce of prevention is worth a pound of cure.

## Honeydew

It is not very often that we witness the gathering of honeydew by the bees. But it appears to be quite plentiful this summer. This is better than nothing, but not very good.

The ordinary kind of honeydew is a secretion from the winged plant lice, or aphides. We hesitated a great deal before ascribing the production of honeydew to the winged aphids. But seeing the sweet substance even on dry leaves in the close vicinity of trees covered with the aphids, we watched closely and had the good luck of being able to perceive the light drops produced by those insects apparently dropping as if from the sky. This was some fifty years ago.

Honeydew is sometimes gathered in large quantities, especially in seasons of short honey crops. We harvested in a single summer some 15,000 pounds of this substance. It is sweet, but of such poor quality that it is not safe for the wintering of bees. It can hardly be sold as honey, although harvested by the bees in the open air. The large crop which is here mentioned was sold by us for the making of chewing tobacco. Anything is good enough for chewing tobacco.

Honeydew should not be left in the hives for winter, for if the bees are confined for a month or more to the hive, this food will be sure to cause diarrhea or, worse yet, constipation or loading of the bowels with feces which they cannot discharge.

Honeydew is harvested on the oaks, the hickories, the elm, the maple, the sycamores, etc. There is another kind, exuding from the leaves, but this is rare.

The color of honeydew, in general, is dark, almost as dark as that of ordinary molasses. Its flavor is very poor.

Honeydew was once believed to be produced from the air, and old Butler, in 1634, wrote:

"The greatest plenty of purest nectar cometh from above, which Almighty God doth miraculously distil out of the air and hath ordained the oak, among all the trees of the wood, to receive and keep the same upon his smooth and solid leaves until either the bee's tongue or the sun's heat draws it away."

## Earlier Packages

It has taken a long time to learn that the package bees which reach the beekeeper early in the spring give far better returns than late delivered ones. The recommendation to get your bees in May, when the weather is getting warm, has cost the buyers many tons of ungathered honey which they might have secured by getting the packages in April.

Mitchener has shown in his recent bulletin that April is none too early for the delivery of package bees even in Canada. His figures demonstrate that two pound packages have given an average return of 167 pounds of honey in Manitoba, when received in April. Later deliveries have resulted in much smaller returns.

It is evident that demand in future will be for much earlier delivery, and the shipper who is ready for the early orders will get an increased share of the business. The old saying about the early bird getting the worm may now be changed to "The early bees get the honey."

## Back to the Soil

The present depression is sending many families back to the farm and many others are seeking to reduce the cost of living by means of some crop to be raised in the back yard. There are more gardens under cultivation than for many years past. Likewise there are those who are keeping a few hens or a few hives of bees to add to the family income.

Some beekeepers are fearful of the result when such people take up beekeeping. The fact is, however, that such sidelines are helpful rather than harmful to the industry as a whole. When large numbers of persons take up any new thing, general interest is likely to be stimulated. It is in periods when there are the greatest number of beginners that beekeeping feels its largest measure of prosperity. The sideline beekeeper is usually an enthusiast, who talks about bees to everyone who will listen. As a result a market for more honey is created than he can supply with his few hives of bees. It is always thus—enthusiasm creates interest and a larger consumption of the product. A large number of enthusiastic sideliners would do more for the honey market right now than any other agency. The fact that many persons who have suffered from decreased income are taking up beekeeping and gardening is likely to have a wholesome effect.

## Business Slows Down

Unfavorable trade conditions are hampering the beekeepers in other countries as well as in America. According to the New Zealand Smallholder, only about fifty tons of honey were exported from that country last year, whereas the year before about twelve hundred tons were exported.

The world will have to learn that no country is sufficient to itself. When any man fails to get his fair share the rest of the world sooner or later must suffer along with him. Artificial trade barriers slow down business all along the line. If a man will not buy, neither can he sell, for each must sell his own product before he can purchase from another.

## Opportunities

On several occasions the American Bee Journal has expressed the opinion that men who are picking up beekeeping outfits at bargain prices will soon begin to secure profits on their investment.

The indications are that the honey industry has passed the turn and will soon be on the upgrade. The big stores of surplus honey in the world's markets are gradually melting away, while new outlets are opening. Prices may not advance rapidly, but the purchasing power of the dollar is increasing through falling prices of products which the beekeeper must buy. Increasing demand with a tendency to higher prices may be looked for before many months. Perhaps this year's crop will find a better market than last.

When men are discouraged and offer their bees and equipment for sale at a small portion of their value, the wise beekeeper will take advantage of the opportunity to extend his operations with small investment. It will be

a long time before so many opportunities to make fortunate investments are available again. Now is the time to buy a home, or a farm, or a business, while it can be had at half price or less; only be careful to pick the real bargains.

## Honey Not a Substitute

In his presidential address, Doctor Zaiss, at the International meeting held at Cairo last February, said: "We should cease to advertise honey as a substitute for sugar. We must base our advertising claims on qualities in honey which are lacking in other foodstuffs."

In a few words the Doctor pointed out the weak spot in all our marketing endeavor. Honey is not a substitute for anything, but has in itself qualities which are not to be found elsewhere. If our industry was sufficiently diligent in pointing out that fact there would be no lack of demand for our product. As long as the consumer thinks of honey merely as another sweet, we are greatly at a disadvantage, for sugar is cheaper and, other things being equal, the buyer will take the cheaper article.

## Honey Limitations

If you want to know what the public thinks of honey, put it on the table before a group of representative people. If the meal be breakfast, the honey is likely to be a popular dish; if any other meal, it will probably be ignored. Recently the writer observed a group of a dozen young ladies at the evening meal. Honey was on the table, but not one of them touched it. The following morning, when a group of these same girls sat down to breakfast, every one of them ate honey. The American public regards honey as a spread for cakes or bread for breakfast. Not one person in a dozen knows any other use for it.

If honey is to find its proper place in the world's market, we must find ways to extend its use beyond a spread for breakfast cakes.

## Roadside Bee Pasture

The present widespread movement for roadside improvement, together with increased acreages for parks and playgrounds, calls for the planting of an immense number of trees. Where the bee men are wide awake such trees as linden, tulip-tree, black locust and other important sources of honey will be included. In many cases it is only necessary to suggest to the proper authorities that honey-yielding trees be included to secure their planting on a liberal scale.

## Taxes

Because of reduced incomes, the payment of taxes is proving burdensome to many people. Taxes fall especially heavy on owners of real estate who have small incomes. A recent survey in one state has shown that the farmers are paying about 25 per cent of their net income for taxes. Instead of reducing government expenditures to keep pace with falling income, legislators look for new sources of taxation. If public expenditures could be reduced as private expenses must be, to keep in line with smaller earning power, there would be less complaint against public officers.

The Government cannot give us anything that we do not first pay for in the form of taxes, yet there seems to be a general idea that the Government can solve all our problems.

## Honey Ice Cream

The recent studies of the place which honey may take in the manufacture of ice cream are interesting. They are important also, because they give definite information as to the proper blend, the average cost and the difficulties which present themselves. It has been shown that when honey is used as the sweetening agent more time is required in freezing and that the resulting ice cream is softer than when sugar is used. The cost is also slightly in favor of sugar, but to offset these things, the honey provides a flavor which is very pleasing to many people. It seems probable that the use of honey in such products will increase as the proper mix becomes better known.

# A Simple Method of Mating Queens

By Observer

A NATIONALLY known queen breeder, Herman Rauchfuss, Sr., has developed a method of mating queens which, for simplicity and fool-proof qualities, seems not likely soon to be excelled.

It requires a minimum of special equipment and leaves colonies intact after the queen mating season is over.

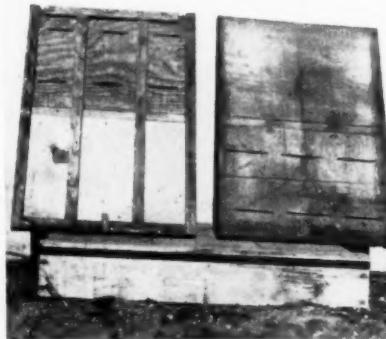
Regular ten-frame shallow supers are used. Eight-frame supers may be used, but are then divided only into three parts, instead of four parts as described. For ten-frame supers, three removable but closely fitting partitions are placed in a super, dividing it into four two-frame nucleus boxes, each one having a separate entrance through the cleat around the edge of the special bottom board.

Such a special bottom board, as illustrated, is provided for each super, although this picture is of an eight-frame bottom board. This bottom board is merely an inner cover with one or more slots cut across it, which are covered **on both sides** with a strip of zinc queen excluder. One slot about  $1\frac{1}{2}$  inches wide may be used, or several slots, as illustrated. On this bottom are dividing strips or cleats, one under each division of the super, so that when one of these special bottoms is placed under a super and another on top four queen-tight compartments will be formed. For the entrances, half-inch spaces are cut out of the cleat around this special bottom board, one entrance for each nucleus.

In use, one frame of all-sealed brood, one frame with foundation starter and one ripe queen-cell are placed in each compartment. It is not necessary to bother about bees for each nucleus, because, when five of these supers are piled up on top of a gloriously strong colony, with a special bottom board between each two supers, and a regular inner cover on top of all, the bees distribute themselves all through the hive, populating the twenty nuclei automatically with just the right number of bees. Of course, the number of nuclei placed on a colony must be regulated according to its strength and the seasonal condition.

The lower story, which contains the colony, may be one or two shallow supers or a deep super, and may be given a queen-cell or, under some conditions, may be a queenright colony.

Now, if a cell fails to hatch or a queen is lost, there is no useless nucleus; no weak or unprotected nucleus to be robbed out; no moth in weak nuclei—indeed, no trouble at all. The shallow frames with a starter are built full of worker-comb



The Rauchfuss nucleus bottom board, eight-frame, for queen mating

and, if plenty of honey is coming in, honey is stored, particularly in any nucleus which may miss mating a queen. No bees are used wastefully.

When the young queens have mated, the stack is torn down, queens caged or used where wanted, and a new stack built up, using brood from the parent hive, or, if need be, from other hives.

When the queen mating season is over, the division boards are pulled out of the supers, the special inner covers (or bottoms) removed, the frames arranged in proper colony order, and the mother colony is ready for winter.

For the beekeeper who is not producing queens as a business, but who makes honey production a specialty, this method of mating, together with the simple Miller method of cell getting, should make possible the keeping of a stock of mated queens on hand ready for emergencies, as well as provide a satisfactory method of requeening without much trouble.

Introducing queens should not be much of a problem, either, in this case, because, as is well known, a laying queen taken from a nucleus and placed immediately in another colony is received more readily than a queen that has been caged for a considerable time.

## Beekeeping in Canada Boosted by Getting Bees Quickly from the South

Figures originating in the Dominion Bureau of Statistics at Ottawa show that Canadian beekeepers are depending more and more on the facility with which they can get shipments of package bees from the South to make increase and to replace their winter losses.

The figures given for the Province of Ontario, for instance, show an im-

portation of \$21,877 worth of bees for the fiscal year ending March 31, 1931; for Manitoba, \$19,746; for the entire dominion, \$70,883.

This heavy demand for package bees is not only evidenced in Canada, but all through the northern states, and it shows the extent to which beekeepers have come to rely on their southern neighbors for package bees. Everything tends to show that this business will increase and that it is a decided boon to the northern beekeepers, as it is such a ready means of increase and replacement.

The recent figures compiled by Professor Mitchener for the Province of Manitoba show that package bees received early frequently do as well as over-wintered colonies in honey production. On the States, beekeepers are making an attempt to match these figures and they are finding that colonies received sufficiently early in the spring can be depended upon to produce a fair crop of honey.

## Let the Apiary Inspectors Affiliate With the Plant Board

### *A Further Suggestion on National Organization*

By W. E. Anderson

Apiary inspection work, with few exceptions, is a part of the duty of regular state boards and departments whose work is under legislative acts. In some cases these boards have authority to make rules governing the inspection work for bee disease. Each of these boards or departments is a member of one of four regional plant quarantine boards of the United States, the directors of which meet each year. Representatives are elected to a national plant quarantine board which likewise hold meetings each year and consider problems of national importance.

Since these organizations are already established and functioning, and in most cases the apiary inspection work is subject to the direction of the boards, it would seem that the directors of apiary inspection in the various states might well affiliate themselves with and meet at the same time and place as the plant quarantine board of which his respective state is a member.

Such an affiliation would be especially desirable as it would do away with the need for a separate organization. Members of the Association of Apiary Inspectors of America now can take no definite action at any of their separate meetings with reference to a quarantine or quarantine policy, but have to return to headquarters and submit rec-

ommendations to their superior for approval. If they met with the regional plant quarantine board of which their state is a member, the inspectors would then have the benefit of approval of their superior when necessary and would be able to take definite action on any proposition.

In the writer's opinion, it is a good policy for apiary inspectors therefore to be members of the social beekeepers' organizations and to attend their meetings to hear the discussions, get the point of view of beekeepers and to sponsor organization work; likewise to convey his idea on matters under discussion. On the other hand, it is poor policy for quarantine measures to be the subject of discussion at social organization meetings.

### Italian Bees— "Standard Equipment"

Italian bees seem to be "standard equipment" almost everywhere in New York and Pennsylvania, at least along the main highways. In August I took a 1200-mile automobile trip, and whenever I stopped I looked at the bees working on the flora by the roadside. All that I saw—in at least thirty inspections—had at least three bands. There was one exception—pure black bees seen working on catnip in a farmyard in Linden, in western New York.

S. F. Haxton,  
Pennsylvania.

### Do Bees Help Pollinate Corn?

There has been much discussion on this, but as yet there are no definite conclusions. Many beekeepers have seen bees at work in the corn fields and have insisted they were storing honey. But were they?

Corn is a very abundant source of pollen and the bees gather much of it, but do they in turn visit the silky tassel and fertilize the ear? Who knows more about this question? Also, just what do bees do in the fields of wheat, rye, barley, and oats?

J. H. Sturdevant,  
Nebraska.

### "Wild" or "Tame" Honey

Strange ideas persist. A well-informed and apparently truthful man told me that near his home city of Clearfield, Pennsylvania, there lived a woodsman who each winter went around selling "wild bees' honey," which the woodsman said was taken from bee trees. This honey, my informant declared, was far superior to "tame" honey, having a finer flavor never to be found in "regular" honey, since the "wild" honey was "gathered from wild flowers."

S. F. Haxton, Pennsylvania.



By N. N. Dodge

### Walla Walla Proposes Ordinance Against Bees

Keeping of honeybees within the city limits of Walla Walla, Washington, will be prohibited if an ordinance being prepared by the city attorney is adopted by the city commission. Rabbits and chickens as well as bees are included among the livestock upon the keeping of which officials frown, in the event that the quarters of the former are not kept in a sanitary condition. The particular objection to the keeping of bees is not stated.

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### Hundreds of Colonies Busy in Wenatchee District

Except for a severe wind and dust storm which lasted for two days, weather conditions were especially favorable for bee activity during the apple blossom season this spring in the famous Wenatchee fruit districts of Washington. Hundreds of colonies of bees are imported to the valley to pollinate the blossoms, according to Mr. Clayton Turnispseed, of Bryant, Washington. The majority of the bees are brought in from the alfalfa and sweet clover districts of the Yakima Valley, although some are brought across the mountains from the fireweed areas of the Pacific Slope. Mr. Turnispseed stated that considerable surplus honey from apple blossoms was stored by many colonies. Some beekeepers had difficulty in moving their bees back to home pastures because of the breaking down of heavy combs. Other beekeepers report very little surplus honey stored, but an encouraging increase in colony population stimulated by the apple nectar flow.

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### Bees Make Raids on Peaceful Seattle Citizens

The Humane Society, city fire department, police department and other public organizations in Seattle, Washington, have been frequently disturbed this spring by frantic calls from housewives requesting aid in removing uninvited swarms of bees from clothes-line posts and other home "hangouts." Each of these organizations makes a practice of reporting that their bee catching squad is busy, and suggests that the complainant look up a beekeeper. One housewife, upon returning from a shopping excursion, found that a swarm of bees had entered her house and clustered on the davenport. Her

ingenious husband succeeded in removing the swarm with the vacuum cleaner. It is not known how he got the bees out of the cleaner bag.

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### Brittain Reports Heavy Spring Flow

A heavy spring honeyflow is reported by Fred Brittain, beekeeper of southwestern Washington. On May 23 he reported several colonies with bees working in six full-depth supers.

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### By Steamship from Los Angeles to Tacoma

On May 6 the Bayside Steamship Company's freighter "Point Loma" arrived in Tacoma, Washington, with 574 colonies of bees which were loaded in Los Angeles April 29. Fred Cote and Roy Cox, of Grays Harbor County, accompanied the bees on the trip and supervised the unloading in Tacoma. The bees were then shipped by truck and rail to three fireweed locations in southwestern Washington.

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### Unusual Weather Conditions in West- ern Colorado

Weather conditions in western Colorado have been very unusual this spring, according to a report from Clarence E. Drexel, of Drexel & Sons' Apiaries, Crawford, Colorado. The season opened with warm winds and sunny skies, but after bees had built up rapidly, snow storms and freezing weather swept the region. In eastern Colorado similar conditions prevailed. Fruit and berry blossoms were frost-bitten, leaves were frozen on the trees, and in some districts the early growth of alfalfa was killed by the cool weather in May.

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### Coffee Shop's "Humpty Dumpty" Din- ner Offers Honey

A special menu for children featured by the Coffee Shop of the Hotel Winthrop of Tacoma, Washington, places honey prominently on the bill-of-fare. This special group of foods for little tots is known as the "Humpty Dumpty Dinner."

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### Friesen to Establish Bees on Home- stead in Southwestern Alaska

Mr. John Friesen, ex-service man, left Seattle early in April for the Matanuska Valley of southwestern Alaska, where he will establish a homestead. Mr. Friesen plans to keep bees on his farm, trying out a few

(Continued on page 344)



I believe that's the way the old jingle goes. Dr. Miller once said that a swarm was a delight to some people; to him it was like being told his neighbor's cows were in his garden. Yet bees do swarm.

This year one is reminded of the fact. Although bees in the clover region must pick and choose among minor honey plants for a living because clover is poor, early blooms were rich and nectar abundant enough to bring bees rapidly to the swarming point.

A peculiar condition which only occurs occasionally was apparent this year. Bees faced starvation, yet swarmed, making it difficult work to hive them and take care of the parent colonies because of robbing. I have only seen that once before in my experience.

This display of pictures is inspired by letters received from beekeepers, most of them asking how to keep swarms from leaving. A correspondent from Minnesota asks particularly how to use a queen and drone trap, because he does not have time to watch his bees and do field work.

This is really a fundamental question, because only a small number of beekeepers earn their living from the products of the hive. Most of them keep bees as a sideline on the farm or in town. Many of the smaller beekeepers want to know "how to use a queen and drone trap." To us the answer is, "We do not use them."

The beginning of swarm prevention lies back in the management which has been given the bees before they start queen-cells for swarming. It has been stated so many times: young queens, good combs, a hive big enough to hold all the brood and the food, supers added quickly enough to allow nectar to be stored out of the way, ventilation in hot weather and shade.

Such management reduces swarms to the lowest possible number, and yet some colonies will persist in swarming. We find in the Dadant

apiaries that the majority of colonies which raise queen-cells in our large hives are attempting to supersede



1. Prime swarm settled on fence post

their queen. The cells, of course, are started during a prosperous period when conditions are right for



2. Ideal prime swarm, easy to take

swarming. Then when a virgin queen emerges a swarm goes with her,

## Fashions in Swarms

By G. H. Cale

A swarm of bees in May  
Is worth a load of hay.  
A swarm of bees in June  
Is worth a silver spoon.  
A swarm of bees in July  
Is hardly worth a fly.



sometimes several successive swarms, as virgins continue to emerge. The correction for this condition, of course, is in making sure that the colonies are headed by vigorous young queens at all times, which, with large numbers of bees, is often difficult to do.

There is little use in a drone or queen trap. If it is necessary to be away from the bees, clip the wings of the queens so the swarms cannot leave. Several days before the issuance of the swarm (in the case of a colony which is really in the notion of swarming and is not attempting to supersede an old mother) the queen ceases to lay and becomes smaller and lighter, so she can fly readily and go with the swarm. She can easily get through the queen trap and into the air. The clipped queen cannot go far.

However, when a virgin emerges from the queen-cells within the hive, the swarm may leave with the virgin, even though you have clipped the old queen. If you kill the old queen to prevent the swarm from issuing, it only delays the swarm until a virgin emerges from one of the cells. As soon as the first virgin is out the swarm will leave. Any of these expedients only delays matters temporarily.

If, however, you kill the queen and take out all the queen-cells before any virgin has a chance to emerge, the bees cannot swarm, particularly if the queen-cells are removed before they are sealed. If you delay beyond this, there is a good chance of a virgin emerging from some obscure corner or there is a chance of leaving a queen-cell which you cannot find, and then the bees will swarm in spite of attempts to prevent it.

The now queenless colony can be requeened with a young queen, after ten days, removing any queen-cells which may have been formed during the interval. It usually ends the matter for the current season. This

will work well also with superseding colonies.

#### Hiving the Swarm

Picture 1. shows a swarm on a post, rather hard to dislodge. A good way is to take the hive to the post and put boxes or other supports under it until it comes pretty well up among the bees, take off the cover and get the bees started over onto the combs. Leave it there for some time if necessary, until the bees have entered. This will not always work.

A still better way is to take a comb (one with brood is best) and place it near the swarm. The bees will soon leave the post and cluster on this comb.

Picture 2 shows the ideal swarm, a prime swarm with the old queen clustered quietly. This is the kind of a swarm that, as Dr. Miller says, is like the neighbor's cows in the garden. If they leave, the crop goes with them.

The swarm catcher comes in handy here. It is an oilcloth bag on an iron hoop fastened to the end of a pole, the smooth side of the oilcloth inside the bag. When the swarm catcher is put under the cluster as high as possible, so that a large part of the cluster lies in the bag, the limb or branch is given a shake and then the bag is quickly closed by turning the hoop. If your swarm catcher is made with the iron hoop holding the enameled cloth bag attached to a metal holder into which the pole or handle screws, it is very easy to take a swarm of this kind. After they are in the bag, unscrew the handle, slip the bag quietly into an empty hive body over the set of combs in the hive below and put on the lid. The bees work out of the bag, onto the comb, and you are sure to have the



3. Ruschill's beard



4. A huge swarm on low bush

queen inside. If the swarm is dumped in front of the hive and the queen gets into the air, the swarm will leave every time. The queen must be inside. Once there, she readily takes possession.

In picture 3, the man with the beard is Charles L. Ruschill, of Colfax, Iowa—a hot weather beard. Mr. Ruschill suggests, if we ever have occasion to have the sheriff look him up, the picture may come in handy. Beards seem to be the fashion among beekeepers and there is no telling whether this is a swarm or whether Mr. Ruschill induced his little pets to pose in this way.

Picture 4 shows a huge swarm on a small tree. It is from Roy Roselieb, of Prophetstown, Illinois. He says it needs no explanation. It looks as though it might be a swarm with virgins and difficult to separate. Sometimes by dropping virgin swarms into a box so the bees run up the side, the virgins can be found and all but one removed. This simplifies matters considerably. Such swarms are very



5. This swarm set up housekeeping outdoors in Alabama

nervous, the bees flying more or less all the time they are clustered and breaking up into groups as the virgins wander around. They are difficult to hive.

A way we use is to take the largest bunch of bees in our swarm catcher. They cannot get out of it. We empty the swarm **into** the hive prepared for it, usually containing combs and some honey, with an empty super shell on the top for air, the entrance closed with grass to dry and release the bees later.

Another good way to handle the flighty virgin swarm is to shake the bees into a regular bee package cage, a wire cage such as bees are shipped in from the South. Take them to a cool basement, feed them well, hive them the next day in a new place, if possible some distance from where they swarmed. This works excellently.

Mr. R. Knox, of Uriah, Alabama, in picture 5, shows what a winter resistant stock will do when they swarm and take a notion to start an outdoor colony. He says: "Our farm tenants often tell us of bees in trees, but when one of them came in with the story of a swarm that had wintered under the shell of a broken limb we said surely he must be drawing on his fancy. However, I drove about fifteen miles, and, sure enough, there they are showing for themselves how they wintered. The picture does not show the combs so well, but it shows plainly that it is covered with bees. It was taken the latter part of March.

"I climbed the tree to within a few feet of the brood nest. The location was well up in the air, high enough for winter winds to have made things uncomfortable, yet they



6. The swarm came right from the hive to Peifer's hat

were as full of pep as if winter had not harmed them in the least."

The last picture, No. 6, was sent in by Vincent Peifer, of Lincoln, Illinois. He says: "It is a picture of me with a swarm of bees on my head and was taken last year when I was fifteen years old. I find beekeeping very interesting, although there are some mishaps in it. In this picture the strange thing is that the bees came directly from the hive and all lit on my head. I did not put the queen in a cage and let the bees cluster on me that way. This is a real swarm that had taken up their position naturally and normally."

Well, it seems to me that just about "takes the cake."

### Concerning Mush—That All Good Beekeepers Should Try

By Rambler II

Mush means a good food for breakfast and provokes a smile. After you have tried this mush, however, I am sure you will pronounce it the dish to pass up for more.

You know corn meal is not a balanced food alone. It is too heating, contains too little mineral, is inclined to form lumps and produce gas. However, it has good sustaining power and its deficiencies can be remedied by the addition of bran, which has minerals in good variety, and it is a good scrub brush for the rough lining of the intestines. Alone, however, it has no sustaining power.

My simple recipe using both corn meal and bran is as follows:

Pour a cup of bran (good mill-run that is not bitter) gradually into two cups of violently boiling water. Stir well until it gets gluey. Then add a half cupful of yellow corn meal just mixed with a little cold water. Ground yellow corn meal is the best if it is fresh and sweet.

Corn meal will show a tendency to lump, so be careful. Mix thoroughly. Then add a quarter of a teaspoonful of iodized salt and all the honey you can get in a single tablespoon. Stir well and set in a double boiler for fifteen minutes. It can cook longer without injury.

Serve, not too hot, with plenty of milk. Skimmed milk is proper provided the cream is used elsewhere. You do not need any sugar. The whole secret is the honey. This dish is pleasant to taste, extremely nutritious, slightly laxative, easily digestible, and I have never known it to cause gas.

Try it. If you don't like it you can give it to the cat or dog and they will lick the platter clean and grow sleek.—From the big sticks of Puget Sound.

### On Fastening Frames For Moving Bees

Having noticed in the April Journal a question and answer on moving bees, I am prompted to give my experience and method of fastening the frames in the hives. My first move was with standard hives, and I fastened the frames with blocks of wood as I was told to do. Some of these blocks jarred loose, most of them allowed the bottoms of the frames to swing, and at the end of the journey the bees carried out their numerous dead. The second move was with Modified Dadant hives, and this time I lost seven queens, besides lots of bees. Right then I called a halt. Such methods might suit others; they did not suit me. Followed many hours of brooding over the matter, during which I made and rejected many plans, until at last I hit upon a plan which I have followed successfully ever since. It consists of a super spring placed about two-thirds down on the two end bars of an outside frame. When properly placed, and tensed, these springs hold the deep frames firmly, automatically take up any slack due to frames pressing closer together as wax obstructions give way, and at the end of the journey there are no dead bees to blacken the ground and mar my joy in the work. Nor need I worry about which way I load the hives on the trailer, for one way works just as well as the other. Being a migratory beekeeper, I have given the plan ample trial. Last year I moved four times. My first move this year was seventy miles; the one I am just completing is one hundred and fourteen. Give it a trial; at a penny each for super springs, you cannot lose much, and the bees may gain a lot.

Harrison Moore, California.

### Honey Dipped Doughnuts

A doughnut glaze containing honey is popping up here and there in the bakery field. One bakery in the South writes us of their success in distributing a doughnut dipped in this honey glaze, and we have just received a very generous lot of two dozen doughnuts from the Jean Ruth Cake Shoppes at Peterboro, Ontario, through the kindness of I. W. Dawson, of Dawson's Bakery, that operates the Cake Shoppe in that city of 22,000. They report that they sell an average of over four hundred dozen doughnuts a day in that community. Of course, their particular icing is protected for their use, but we understand that one of the main ingredients of the glaze is clover honey.

We know that one bite of these doughnuts leaves a lasting impression.

### Bees on the Job All Winter

This is the title of a clipping from the Omaha Bee-News, Saturday, April 18, sent to us by W. R. Perry, of Omaha. It states that "Lightnin'" Bill Jones told of herding a swarm of bees from Nebraska to California in the winter time without losing a bee. Something just reported from West Point may confirm this story.

"A Cuming County farmer says his bees produced 175 pounds of honey during the winter just passed. They took little time out for cold days, and kept right on a production basis all the time. This will near'y match the one about the ingenious man who crossed his bees with fireflies so they could put on a night shift.

"However, the honey business is on a sound and profitable basis in Nebraska. In 1929, the last year reported on, 42,182 colonies produced for market 2,530,920 pounds of honey, which sold for \$303,710. Which is a respectable sum of money.

"As days go on, new sources of revenue are continually being added to Nebraska's resources, so that the well being of the state in a material way is constantly being placed on a solider foundation. Adding milk and honey to the hogs and hominy, as has been done, means a lot more than appears on the surface."

Mr. Perry comments: "Is it any wonder we can't sell our honey in Nebraska this year, when bees are out making a better average yield in winter than in the summer, when our sweet clover and all our honey plants are at their best? I got a chuckle out of this."

### An Erroneous Impression

It has been the impression of contributors, as well as prospective supporters of the American Honey Institute, that the compensation of its director, Dr. H. E. Barnard, is \$5,000 per year.

On the contrary, his net income from the Institute is less than \$2,000 per year, as he pays one-half of Miss Fischer's salary, the rent of the rooms occupied by the Institute, the various items of office expense, travel and incidentals.

Were it not for other sources of income and his great interest in honey, Dr. Barnard could not afford, nor would he be interested in continuing his direction of the Institute.

The Board of Directors are in intimate touch with all Institute affairs by means of special letters from Dr. Barnard and Miss Fischer. If contributors will read News Notes and the annual report as published in the bee journals, they will be quite well informed of the service the Institute is rendering.—Lewis Parks, Chairman, Board of Directors.

# Factors Influencing the Yield of Honey

By J. A. Munro, North Dakota Experiment Station

FOR North Dakota, and to a large extent throughout the Great Plains region, where sweet clover is the main nectar yielder for surplus production, the months of July and August may be considered as the main nectar flow period.

Properly cared for colonies make the most rapid and appreciable gains in hive weight during those months. It is then that the important nectar-yielding plants are in bloom to the fullest extent and most colonies are in proper condition for gathering.

In this study several factors have been briefly considered in their relation to the amount of honey produced by a hive of bees on scales. Although the amount of data on hand might justify the working out of correlation figures, practically nothing has been done in that direction. This paper includes only a review of the main factors as probably affecting the colony on scales, together with observations made and conclusions drawn.

In a study of this kind there are in general two main types of factors to be considered. The factors which belong to "weather" include rainfall or precipitation, the amount of sunshine, temperatures, wind direction and velocity, and so on, all of which could not be conveniently considered in a brief paper at this time. The factors included under weather may be considered as variable or fluctuating. Factors which have to do with bees, their condition, the nectar-yielding plants and the soil on which they are grown may for all practical purposes in this study be considered as fairly constant.

During the seasons of 1927 and 1928 daily weights were recorded of a hive of bees on scales in the experiment station apiary at Fargo, North Dakota. Each season the colony selected for this purpose was normal and apparently of average strength as compared with the other colonies in the apiary. Except for daily weight readings, the scale colony was given the same care and attention as the rest of the hives in the yard. All colonies were provided with supers for storage as needed, and aside from that very little care was necessary. So far as could be ascertained, no swarming occurred during either season.

The type of soil in the vicinity of the apiary and for a radius of several miles included the Fargo silty clay, Fargo clay, and Fargo clay alkali phase, upon all of which sweet clover thrives and grows well. Most of the acreage of this plant, available to the bees, was situated to the west of the apiary, on the Fargo clay alkali phase type of soil.

The factors reported by Mr. Munro agree so well with our experience that we have thought well to insert his study entire. The only thing which he does not mention, which we believe to have influence, is the amount of electricity in the atmosphere. We believe a heavily charged atmosphere to be favorable to honey production.

This article is taken from the *Journal of Economic Entomology*, June, 1929.

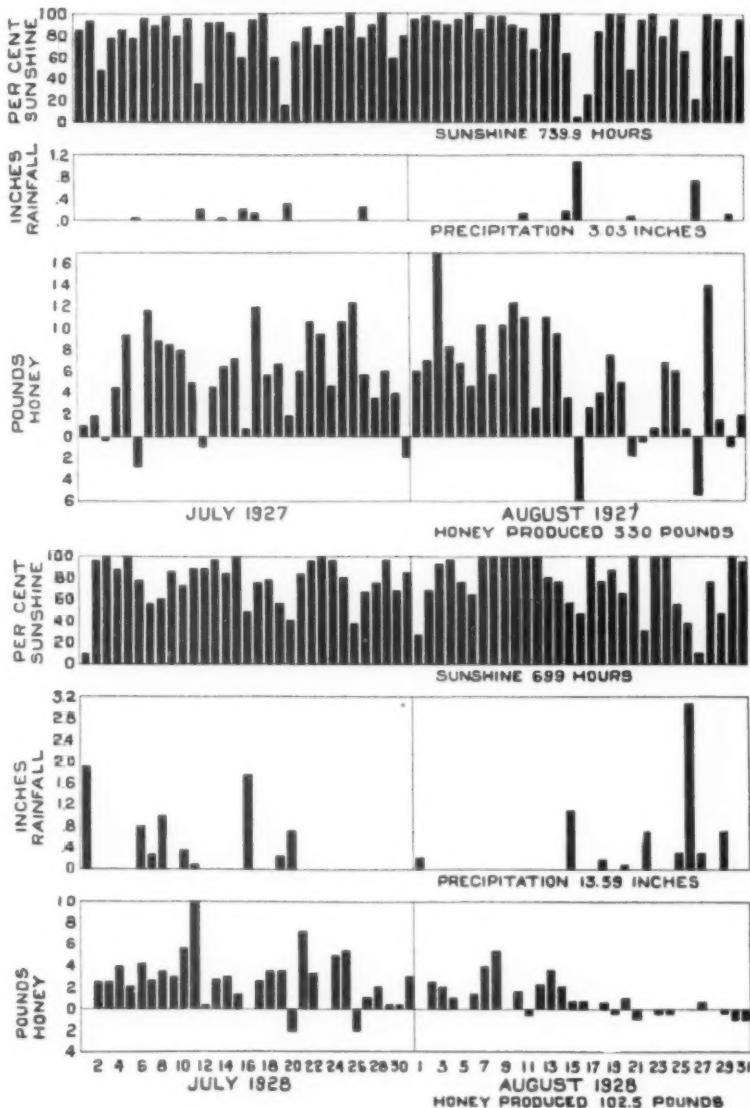
For the size of the apiary there was abundance of sweet clover and

other bloom, throughout each of the seasons, within range of bee flight.

Weather data were secured from the United States Weather Bureau, Moorhead, Minnesota. This station is located approximately two and one-half miles from the apiary in which the scale colony was situated. Since this station might be included in the range flight of the scale colony of bees, the weather data can be regarded as satisfactorily representing the weather conditions as existing in the apiary.

Briefly, the July-August period of 1927 was favorable for honey production. The total rainfall or precipitation for those two months amounted to 3.03 inches; of this, 1.01

## RELATION OF SUNSHINE AND PRECIPITATION TO CHANGES IN HIVE WEIGHT



inches fell during July and the balance of 2.02 inches was recorded for August. The net gain in weight of the scale hive of bees for that period was 330 pounds; of this, 168 $\frac{3}{4}$  pounds was recorded for July and the balance of 161 $\frac{1}{4}$  pounds for August. Reference to the sunshine data for those months shows that for July, 1927, there was only 80 per cent of possible sunshine, or a total of 381.6 hours of sunshine for the 31-day period. August showed 82 per cent of possible sunshine, or a total of 358.3 hours sunshine for the 31 days of the month.

Turning to the July-August period for 1928, we find that conditions were what might be termed unfavorable for commercial honey production. The total rainfall for that period was 13.59 inches (more than four times as much rainfall or precipitation as occurred during the 1927 two-month period). Of this, 7.17 inches of rain fell during July, and the balance of 6.42 inches fell during August. The net gain of the hive of bees on scales for this 1928 two-month period was 102 $\frac{1}{2}$  pounds, of which 80 pounds net gain was for July and the balance of 22 $\frac{1}{2}$  pounds was for August. A review of sunshine data for July of that period shows 76 per cent of possible sunshine, or a total of 364.6 hours of sunshine for the month. August showed 76 per cent of possible sunshine, or a total of 334.4 hours of sunshine for the month.

In this connection it is of interest to mention the average spread between the maximum and minimum temperatures for the 1927 and 1928 periods, respectively.

Maximum temperatures for these periods refer to day temperatures and minimum temperatures refer to night temperatures.

For July, 1927, the average spread between the maximum and minimum temperatures was 20.5 degrees Fahrenheit; for August, 1927, the average spread was 24.3 degrees Fahrenheit, as compared with a spread of 20 degrees Fahrenheit for July, 1928, and 22.4 degrees Fahrenheit for August, 1928. In other words, the average spread between the maximum and minimum temperatures for the total July-August period of 1927 was 22.4 degrees Fahrenheit, and for the same period in 1928 was 21.2 degrees Fahrenheit—a difference of 1.2 degrees Fahrenheit in favor of the 1927 period.

So far, the weather factors, including rainfall, sunshine and temperatures, have been mentioned. Briefly considering these, it would not appear that the slight reduction of hours of sunshine for the 1928 period as compared with the period of the previous year was a major factor in connection with the reduced

yield of honey for 1928. For the July-August period of 1927 there was a total of 739.9 hours of sunshine, as compared with 699 hours of sunshine for the same period of 1928; this represents a difference of only 40.9 hours of sunshine in favor of the 1927 period.

To all appearances the low yield of 1928 was due largely to the excessively heavy rainfall occurring through the two-month period. It is probable that the rains acted in a three-fold capacity to prevent nectar gathering by the bees. While it was actually raining the bees were confined to their hives; and, second, the

heavy rains probably washed out or diluted the nectar in the flowers so that it could not be gathered after the rain had ceased. The third way in which an excessive amount of rain may probably affect nectar secretion, and indirectly gathering by the bees, may be by the effect of the rain on the soil. Of course, soils differ in their moisture holding capacities.

During the two-month period of 1928, on several occasions, fields in the vicinity of the apiary became soaked with water and remained in that condition for several days following heavy rains. This condition was not apparent for the 1927 period.

## Shall Bees Be Taxed To Insure Money for Inspection

By E. J. McCormick  
Secretary Cook-DuPage Beekeepers' Association, Illinois

WE seem to have a few near-sighted or selfish beekeepers belonging to our county beekeepers' associations, who, in order to eliminate the small beekeeper as a competitor, are using foulbrood as a disguise by recommending that the state place a special tax on beekeeping to discourage the small producer.

Taxes are paid to keep bees on the same basis as producing any other kind of agricultural crop, and that is on the property required to keep the apiary.

As disease control seems to be the chief object for suggesting this added tax, we ask whether it is any more just to place a special tax on a beekeeper than it is over a man who keeps horses, cows, goats, chickens, rabbits, hogs, etc., as all living creatures are subject to disease, which in some cases causes the state to spend quite a sum of money to control. This is true with our tuberculosis eradication program with cows, and also in controlling cholera among the swine.

In your opinion, would an additional tax burden on a farmer improve the health of his live stock? How would an additional tax affect the marketing of honey in Illinois?

De Kalb County Association goes on record as suggesting a tax of \$5.00 per hive for one to three stands, with a reduced price for all over that amount. As taxes cannot be made to favor any type or size of apiary, this would mean that a tax of \$5.00 per stand would apply whether you have one stand or one hundred stands.

Assuming that the average surplus per stand over a period of five years is eighty pounds, and the tax per stand is \$5.00, your tax cost would be 6 $\frac{1}{4}$  cents per pound.

Western honey can be produced and shipped in carload to our Illinois

markets at a cost not exceeding 6 $\frac{1}{4}$  cents per pound, or the equivalent to their tax cost. With this condition existing, what chance would an Illinois producer have in competing with honey that could be delivered to his door at a price equal to his tax? If he did the natural thing, he would quit producing honey and purchase his supply to sell to his trade, as this would be his only way to compete and stay in business.

In causing beekeeping to be unprofitable in our state, we will suffer a tremendous loss due to our not gathering the nectar available and marketing, and also the loss in crops due to improper pollination.

In the writer's opinion, some of the beekeepers are of the belief that by eliminating the small, careless beekeeper all of their foulbrood troubles would be nil. This is not true, as our inspection system covers the small man as well as the larger producer, and all disease found is destroyed. The greatest evil that we have from foulbrood is the bee tree that is not inspected, and when the bees die out from foulbrood it would be robbed out by the bees in your apiary and brought back to contaminate the brood.

Beekeeping in this state should be encouraged instead of being driven out by taxation, as an added wealth is given to the state through better crops caused by proper pollination, and as a national defense bees hold a very important position in the production of honey.

In our last war, the World War, sugar would never have reached the price of 35 cents or more per pound if the beekeeping industry had been producing honey in sufficient quantities.

The penalty that the state now imposes upon a beekeeper for a con-

dition for which he is in no way responsible, or able to control—that is, the destroying of his personal property, with no reimbursement, when foulbrood is found in a hive—is greater than that imposed upon any other branch of agriculture, and far exceeds any just tax that could be placed on this industry.

Beekeeping should be encouraged, and proper legislation should be enacted to reimburse the beekeeper for part of the loss suffered by equipment destroyed in fighting the disease known as American foulbrood.

## A Comment on Regional Organization

In regard to the agitation for a regional national beekeepers' association, why not get back of the American Honey Producers' League? Their meetings could be and have been in the past in various parts of the country.

I am quite sure that if the beekeepers would all join their state association, and attend the meetings, they could send an instructed delegate to the national meeting to tell what is wanted or needed in their particular locality.

Years ago when the combined harvester first was introduced it was a problem to get all the horses to do an equal share of the work. Eventually some brainy individual devised what is known as the "Jackson hitch," which makes each and every horse do his equal share.

Who can devise a "Jackson hitch" for the beekeepers so that all will concentrate on existing associations and so secure united action for the good of all?

H. Harberg, North Dakota.

## The Institute Seal



This seal shown here, which is gradually appearing on letterheads, printed matter, labels, and other material of contributors to the American Honey Institute, is designed with a mortise so the year numerals may be changed, making it unnecessary to buy a seal every year.

These seals are priced at \$1.75 each and can be ordered from Russell H. Kelty, treasurer of the American Honey Institute, East Lansing, Michigan, or from Lewis Parks, chairman, Board of Directors, care of G. B. Lewis Company, Watertown, Wisconsin.



## BEE INDUSTRIES ASSOCIATION OF AMERICA CHAMBER OF COMMERCE BUILDING INDIANAPOLIS

DR. H. E. BARNARD, PRESIDENT

### The Merchants' Index

Mrs. Alma Carson, of the Colorado Honey Producers' Association, sent an interesting page from "The Merchants' Index" under date of April 30. It contained a half-page ad of the Supreme Bakers' broadcasting over KOA, KGHF, KFXJ and KLZ, which pictures honey in the illustration and includes honey in the type. Here's a bit of this excellent copy:

"Honey is both tasty and good for you when served with these dainty, crispy, salted soda crackers. The Merchants' Biscuit Company of Denver."

That's cooperative advertising, isn't it?

### Speaking of Radio Programs

Professor Munro, of North Dakota University, wrote Dr. Barnard as follows:

"You will recall that you suggested to Miss Constance Leiby the desirability of carrying on research on honey. Since then the project on the subject has been outlined and approved and work has been started. Miss Leiby is very much interested in this work.

"Just yesterday she presented a radio talk on honey over WDAY, Fargo, and plans to follow this up with further talks on honey later. Her research project on honey includes the use of honey as a sweetener in various forms of cookery, desserts, salads. I just wanted to tell you something about the good work in this part of the country you have accomplished by making contact with the Home Economics Department of this college."

Miss Arlene Weidenkopf, assistant secretary of the Wisconsin State Beekeepers' Association, wrote that Mrs. R. E. Vaughn gave a broadcast on May 13 over WHA, Madison, Wisconsin. Miss Weidenkopf is always on the outlook for honey references in magazines and papers and is one of the best library assistants (at least we are going to call her that) the American Honey Institute has. She averages no less than three clippings per month. She has interested several local Wisconsin papers in running honey recipes in their home pages.

Mrs. A. Bakay, of Gary, Indiana, reported a honey program from a Chicago station and wrote and asked for recipe booklet which she said this station announced she might receive

by writing American Honey Institute.

Several local programs at Indianapolis have included honey recipes.

### That's It—Important as a Food!

Blanche Frazier, dietitian and nurse in the office of Dr. James S. McLester, 930 South Twentieth Street, Birmingham, Alabama, writes us:

"We are very much interested here in the nutritive value of honey, and Dr. McLester prescribes it frequently for our patients. We have not attempted any experimental work either in the laboratory or with patients, but our experience with honey as an article of food has been highly satisfactory."

Miss Frazier hits the nail on the head perfectly—as an article of food. We must forget this discussing honey from the therapeutic standpoint—it's a food of merit and as such ought to be consumed in volume—millions of pounds each year, just as all other good foods are consumed in quantity. Beekeepers have the notion that honey belongs in the medicine chest. The medicine chest can accommodate only two- and three-ounce bottles. Can we hope for quantity consumption in two- and three-ounce sizes?

In the pantry, food is found always and in almost daily demand. That's where honey belongs—among the ingredients required for daily dishes!

### National Honey Week Reminder

No. 3

Try to interest your local utility home service directors, home economics teachers in grade schools, hospital dietitians, and college home demonstration agents in National Honey Week. The summer months are good ones to discuss local arrangements with them so that when fall comes they will be all set to go.

Grade and high school home economic teachers can give their domestic science classes a lesson on honey, and to the girl giving the best honey demonstration the local beekeeper could offer a prize—a half dozen cakes of comb honey, ten-pound pail of honey, or combination prize.

High school students in freshman or sophomore food classes can give very good demonstrations, and during National Honey Week would be an excellent time for them to give such honey demonstrations.

Home demonstration agents should be sponsoring honey during National (Continued on page 343)



The big home of the honeybees at J. J. Wilder's, Cordele, Georgia

## Fine Honey in Georgia from Both Mountains and Swamps

By F. M. Baldwin

**C**OL. CHARLES A. LINDBERG found flying conditions very unfavorable when he undertook to fly last Friday from Miami to Washington. He was scheduled to leave Miami in the morning, stop in this county on Sapelo Island as the guest of Mr. Coffin for lunch, and go on to the Capital in the afternoon. He made it all right to this (McIntosh) county. He met the distinguished party at Mr. Coffin's home, staid a couple of hours, and started north; but only got to Charleston, where he had to stay over night, waiting for better weather. Taking off from there Saturday morning, he got no farther than Hatteras, N. C. Clouds, fog and rain detained him and he reached Washington Sunday afternoon, almost forty-eight hours behind time. Our bees have had similar trouble in their flight all winter. Flying conditions for them have been very bad.

Ordinarily our season opens in December. Maple begins to bloom as early as the tenth to the fifteenth, and by Christmas the colonies are breeding up strong. This time I saw no signs of activity in the yards until January, and not much then until after the fifteenth. Bad weather conditions. That does not mean freezing weather, for we had very little of that; just too cool for the trees to bloom and the bees to work. They had a flying day or two nearly every week, but conditions were unfavorable and they did almost no work.

The last half of January was fine and the colonies all got well under headway. The outlook then was that they would make up for all lost time

and that when the flow came in April they would be at the peak of their strength. February brought us a bad setback, and brood rearing has cut largely into the surplus in the fool chambers. We are experiencing that variety which is said to add spice to life. At any rate the year, *as usual*, is different, and that makes the bee-keeper guess. The outcome is not promising at this writing. But, like all the craft, we are optimistic.



John W. Cash, of Bogart, largest beekeeper in the mountain end of Georgia.

The home yard here in Darien went into the winter in good condition, plenty of young bees and stores. The outyards were not in as good shape and we are having trouble with them. Weather is very bad for outdoor work, and feeding is needed. That is to be done by equalizing stores when it is wise to open the hives.

Perhaps a little geography will interest your readers. Georgia is the largest state east of the Mississippi, extending from the mountains on the north to Florida on the south and the Atlantic on the southeast. The Altamaha River, on which I live, is the largest stream entirely within the state and drains a large part of its great territory. All our streams as they approach the sea are lined with swamps in which grow various kinds of gum trees and lots of other plants and vines that have nectar-bearing bloom. The flat-woods that border these swamps are full of titi, gallberry and scrub palmetto. Along the coast is a sprinkling of cabbage palmetto trees that help out a little in summer when the spring flow is over. The coast is lined with islands, some of them small, others quite large. The largest are Cumberland at the south, St. Simons as you go north, then Sapelo, on which the President and Mrs. Coolidge spent their holiday vacation with Mr. Coffin. North of that is St. Catherines, on which Miss King has long kept bees successfully. Our river enters the sea above St. Simons and below Sapelo, through a delta that is filled with rich alluvial islands. Most of these have gone uncultivated since labor became too



Tupelo gum as it grows along Georgia's streams

high for the growing of rice, which was once a profitable crop along this coast.

It is four hundred miles from here to the Tennessee line, just this side of Chattanooga. This long stretch of country gives us a great variety of plants and climate. Our methods of apiculture have to vary to suit the section in which we work. Mr. Cash, our largest beekeeper in the mountain end of the state, faces different problems from what Mr. Wilder does in the south end. Wilder, the largest owner of bees in the world, has his fifteen thousand colonies in this state and Florida in locations that call for methods that Mr. Cash does not need, and vice versa. Part of Wilder's apiaries surround the great Okefenokee Swamp, which contains about seven hundred square miles. The yards are near the edge of this swamp and surround it, being placed a few miles apart. Then he has lined the classic Suwanee River, famous in song, with yards, and he has bees in many counties of Florida. He gets tupelo, gallberry, partridge pea and other honeys to the amount of many carloads annually.

My yards are along the river, beginning at my home and running up the north side of the stream. Our best honey is tupelo and gallberry, blended by the bees. That is a choice table sweet that equals the best. Both honeys are of exquisite flavor and, if the proportion of tupelo is right, the blend will not granulate. We can pack it as comb honey (chunk honey) in glass or tin, as our trade demands. We get better prices, therefore, than you folks who live in the clover belt and get a product that goes to sugar when it turns cold.

ers. The waters are full of fish, the woods and swamp of game and bees. There are many wild swarms in the hollow trees in the flat-woods as well as in the swamps, but more in the last than the first. It is a great country for the bee hunter—better than the West, about which Zane Gray wrote in "The Bee Keeper."

Georgia.

### Who Wrote This?—"Another Year Among the Bees"

An article with this title, "Another Year Among the Bees," is in our hands and has been held for a long time. Through error the author's name and address has been lost. If the author reads this little notice, please send in the information which will allow the manuscript to be used.

### Early Honey in Florida

We have had a remarkable season in this country the past winter—cold and rains almost every week, which has caused much bloom of the wild pennyroyal. I have not known so much bloom with a good yield of nectar in twelve years. The bees have built up as strong as they usually are in May.

The excessive moisture has caused the citrus fruit to yield as I have never known it to do before. I have nearly two supers of citrus honey ripening on the hives (March 28). It will be about two weeks before I take it off, as it will have to ripen more thoroughly this time of the year. Usually we don't expect any yield of honey until the saw palmetto comes, and our first extraction is about the middle of May.

Frank D. Wilson, Florida.



One of the apiaries of John W. Cash

# How to Make the Most of a Good Honey Harvest

By Alexander Bogdanoff

ALL beekeepers know that only strong colonies give good profit. Our beekeeping books advise to prepare that force for the beginning of the principal honey harvest. Mr. Demuth, editor of *Gleanings*, says: "It is necessary for the bees to rear brood heavily for the honey harvest, and not during the harvest itself." Nobody will dispute that fact.

However, when we speak of the honey harvest we must not forget its duration. In regions where the honeyflow is short, the beginning and end are, so to speak, one and the same. The case is entirely different in regions where the honey harvest is long and sometimes is only broken by short intervals for as much as two months. Then it is necessary to divide the time into several periods and observe not only the beginning of it, but the middle and end as well.

Take the case of the beekeeper who has prepared his bees for the beginning of the honey harvest to his best ability. The colonies have enough room to store the nectar and, in addition, they have sufficient food, plenty of young nurse bees and plenty of field bees. The life of the bee in summer, however, is very short, only three to six weeks. (Zander says six weeks, von Buttler-Reepen five weeks, and, if the honeyflow is heavy, three weeks).

Let us suppose that two to three weeks of the honeyflow have passed. A considerable number of bees die from work in the field. Their place is taken by younger bees and they are supported in turn by new brood. After that the empty cells are filled with honey, especially when the brood area is small. Even if the brood cells are used by the queen, she lessens her work considerably—more than she should—to replace the losses of old bees. Bees occupied in honey gathering are not inclined to brood rearing in a large degree.

So during the next two or three weeks, the death of bees goes on as usual, but the replacements are less. Now it is clear that the end of a long honeyflow, of five or six weeks or more, is considerably less profitable than it should be. During such a flow, with intense work, bees get lost rapidly, and after four or five weeks colonies are so reduced that the daily increase of the scale hive is inconsiderable.

Therefore, in regions where the honeyflow is long or where there are several honeyflows following one another, the bees cannot get all the honey, and much of it is lost to the beekeeper.

I, for one, at first did not pay much attention to the difference in the amount of honey in the beginning

and end of the honeyflow, attributing the less amount of honey at the end of the flow to the small amount of nectar. But in 1928, thanks to wet weather, the first part of our honeyflow was not available to the bees. Nevertheless, I succeeded in keeping up the force of the bees, by an extra supply of food, till the beginning of the second honeyflow.

In ordinary years the daily amount of honey of the scale hive was, for the first half of the honeyflow, always more plentiful. The maximum reached 4 to 4½ kg. a day and was interrupted only by bad weather. In the second part of the flow the amount was lower (a maximum of 3 kg.), but in 1928, when only the second part of the flow could be utilized by the bees, the daily amount rose to 5 kg. as a maximum.

When we compare the results of honeyflows according to the scale hive for six years, we find that the daily gain is always higher in the first part of the honeyflow and less in the second. This is reasonable. If the gain is greater, the bees must work with more energy, so they wear out and die sooner. The death of bees by accidents, rain, wind, etc., has to be considered also.

To make the most of the honeyflow from beginning to end, there are three means:

(1) Make sure that there is enough room for the queen in the brood nest. Avoid using the queen excluder under the supers, so the bees will not fill up the free cells of the brood nest with honey. Take care that the supers are always of sufficient number with frames and empty comb, without foundation if possible. Even if the queens put brood in the supers, that is usually because the combs in the brood nest are not suitable for

their use. Also brood in the supers is of little consequence, for it will scarcely be in the way. It soon comes out, and when the super is taken off all of it is filled with honey. Of course, when section honey is being produced, queens cannot always be allowed such liberty. Then it is better to use the plans which follow under 2 and 3, a practice followed in East Siberia, near Vladivostok.

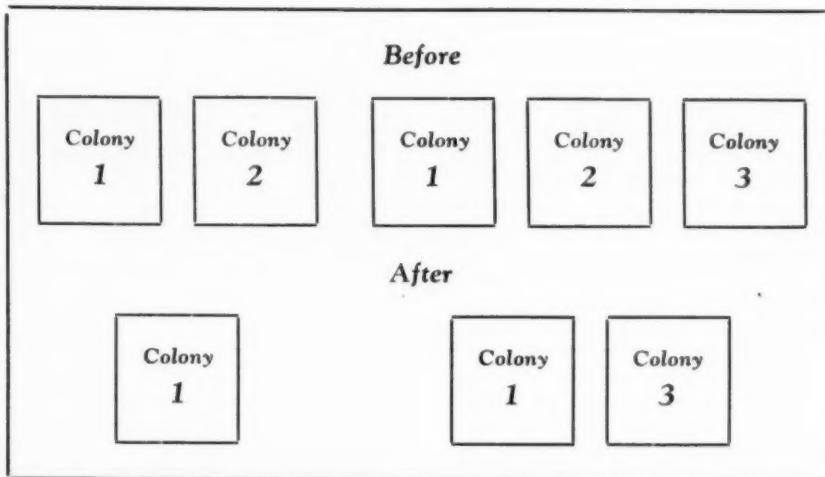
## Reuniting the Working Force

(2) When section honey is being produced and the proportions of the nest cannot be too great, to be able to make use of the end of the honeyflow in a full measure, the beekeeper may resort to reinforcing the colonies by collecting the working force together. To start with, the hives are placed in groups of two or three. After three or four weeks of work have ended and the strength of the colonies begins to drop, one of the hives, say No. 2 of the accompanying diagram, is set away to a new location, and the remaining hive, No. 1, placed in the center between as shown. Then the field bees of No. 2 will fly in with No. 1, reinforcing the colony.

Hive No. 2 meanwhile will lose in strength, but, being provided with honey and nurse bees, the queen will renew her brood rearing with energy. Since the income of honey is less, cells will be free and the presence of nurse bees will awaken in the queen the desire for more brood. (It is necessary to give these bees water for two or three days after they are set aside in this way.)

## Turning Bees Into Honey

(3) This way, as well as in the one just mentioned, is a method of uniting, but instead of putting colony



This is the way Mr. Bogdanoff would do it, either as at the right or the left, in the two sets of colonies shown above

No. 2 aside, it is broken up entirely, the bees returning back to the hive, the brood and nurse bees are transferred likewise to the hives left, and the breeding queen used elsewhere. She may even be put in with these united hives if she is a good one.

As for the amount of honey which the colony destroyed might have made, that will be included in the harvest anyway. Such an expedient lessens the number of colonies and, of course, cannot be used without loss, except where bees are cheap or where the apiary already is overlarge.

Also, to reinforce colonies during the second part of a long flow, bees may be bought from other regions where the harvest has ended earlier. In any event it is necessary to keep

in view local conditions, the price of honey and of bees, the amount of work; and only personal experience can indicate the best way of managing the bees to make necessary corrections and increase.

Here in Finland, bees are expensive and to buy them is difficult, so, in producing extracted honey, the first plan mentioned gives satisfactory results. The second one is more or less satisfactory, but the third is hardly practicable.

In the United States, where comb honey is also produced, the use of bees from the South is an everyday occurrence and the last plan may give fairly good results.

Finland.

## Triple Cell Building Hives

By Jes Dalton

THE picture partly shows the idea which many queen breeders have been practicing to bring on cells constantly without keeping colonies queenless or fussing with swarm boxes or extra contrivances. On page 46, "Practical Queen Rearing," by Pellett, such a hive is described as a double hive. It is used by J. F. Diemer, of Liberty, Missouri.

Diemer uses movable division boards and in cool weather contracts his cell-building compartment, which is the third part of the triple hive. In Louisiana, where the bees are active nearly all the year, I have never seen the movable division board. I imagine bees would either stick it very tight or else eat around it.

The one in the picture is made of eight-frame dimensions, with the frames running crosswise the whole length, with an entrance at either end (which would normally be the sides of the colony).

Division boards are built in just where the supers would meet if three were placed on top of the hive. A

good colony with a queen should be transferred to each end, with the central compartment filled preferably with sealed combs of honey.

What extra brood is left over is put in a super and placed over this honey in the central compartment. Two frames of unsealed brood are used in the center between which to place the queen-cells. Unless honey is coming in, a Doolittle division board feeder is used also.

Graft your cells, place them in a frame between the frames of unsealed brood above, pour in the feed. A little practice will soon show you how to proceed, and the beauty of it is that nothing is wasted and nothing is idle. The two queens and working forces keep rearing bees, maintaining the heat, and nurse bees coming on all the time, with all the stores needed the whole hive can be supered with a super over each compartment. When the frames of brood become sealed, move them to one side and exchange for fresh ones from below. By swapping the emerged

combs from the cell-rearing compartment above to the queenright compartments at the ends below, a continuous force of young nurse bees is kept above, where maintaining combs of unsealed larvae gives a continuous handling of royal jelly. The bees take up feed from the feeder and the queens work with the normal force below, so that you have almost ideal conditions for large, healthy cells under a honeyflow impulse, plenty of nurse bee warmth, and queenright colonies underneath the cells, so that they are reared under a semi-supersEDURE impulse which should give extra fine results.

For one wishing a few cells with no extra equipment, I know of no better plan, and for many cells I use several such colonies, grafting in some and finishing in others.

There are a few little kinks that the average queen breeder knows. First, the bees are slow to accept cells unless they are prosperous (hence the feed). Feed should be given a few times before the cells are put in.

Also, if in preparing the hive one will place the frame of brood for grafting in this super, together with the cells, an hour or so before grafting, the bees will accept and feed the larvae, clean out and polish the empty cells. Then when the larvae are transferred they have already worked on them and the success is just that much more certain. If royal jelly is used in grafting, tear down a cell in the super and use the jelly which is theirs from their own larvae. All these little kinks help when the conditions are not exceptionally favorable.

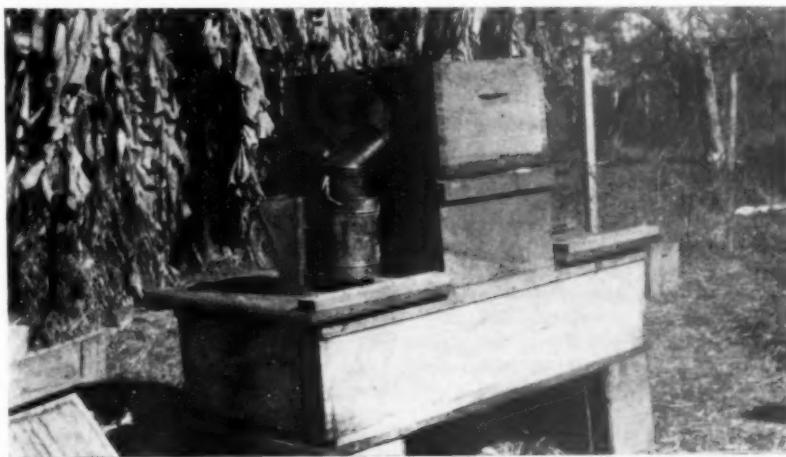
## Duco Cement for Labels

Some time ago I saw in the Journal someone had trouble with the labels to stick on the containers. This has been a great item with me. The editor told him that the common wall paper paste was the best they used.

Now we have used almost everything we could think of. With wall paper paste we sometimes have had fairly good success, but most of the time they would drop off the same as the man stated some time ago.

Last Christmas, when our folks were making some ornaments for Christmas, they were pasting oilcloth on some ornaments and it was sticking on good, so I tried it on the labels on the honey pails and it worked. This stuff is called Duco household cement, put up in tubes.

I only put this cement at the ends of the labels and it will paste from 200 to 400. You may use my name if you wish to and anyone having trouble with this stuff not sticking on the labels may send me a post card and I will come and paste them on for them. Herman Zirbel, Mason City, Iowa.



The cell building hive described by Dalton

## "Toppers" for Section Honey

By H. A. Insinger

If the topper theory is not too far fetched, then the section honey producer might give it consideration. It appears that proper hive ventilation is one of the chief handicaps when running for section honey, and, speaking theoretically, the topper seems to correct this trouble.

Now, where should one place the section super? I am sure that I don't know—as yet. Last year one was placed below the brood chamber, but since the flow failed to materialize I am unable to make any definite statement. The drouth in all likelihood also killed out the clover hereabouts, and so I doubt whether a chance will be given me to experiment along this line this season.

It has been established that the bees like to have their stores above the brood. The suggestion, then, would be, to place the section super over the brood, next to the vestibule. With the rising of the stack the brood chamber is correspondingly removed from the entrance, and, presuming that there is a difference of temperature within the hive, it should naturally be coolest down below where the brood is. Will it have any telling effect?

Another experiment might be to have the section super below the brood chamber; however, I doubt its success. There is a third possibility: use the vestibule as a middle entrance, placing the bee escape hole over the brood chamber, or, to put it differently, turn the vestibule upside down and do the supering above the vestibule. But I wonder whether the bees will stand for being separated from the brood in such a way.

You, with the experimental turn of mind, try your hand and let us hear the results.

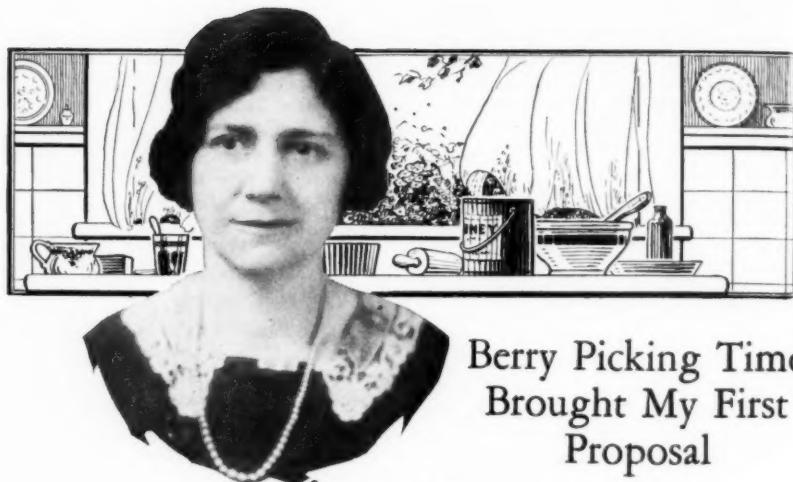
## Loss of Queens

The disappearance of the queen after "shaking" for the prevention of swarming seems rather common. May not this loss be due to placing the frame of brood with the queen between empty combs, thereby causing the bees to regard the queen as failing, and therefore her disappearance?

May it be suggested that placing the frame of brood and the queen next the side of the brood chamber, and all the empty combs together to fill out the chamber, would make it appear rather as a new job for her majesty, with no suggestion of failure in her duty, and thereby avoid a disappearance?

If this simple plan of arrangement will avoid this loss it will be a step forward. At any rate isn't it worth a trial?

C. D. Cheney, New Jersey.



## Berry Picking Time Brought My First Proposal

By Betty Bee

I WONDER if you remember those dear old-fashioned days when the family clan were wont to gather from far and near at berry picking time for an all-day visit at grandmother's or Uncle Timothy's or Cousin Nellie's? And do you remember the thrill of that bumpy ride on the old hay rack along the rough road with the hot summer sun pouring down upon your head? And do you remember the odor of the weeds and grasses you passed, and finally the sight of the blue hills and the dim distant woodlands, with their suggestions to your childish mind of snakes and bears and perhaps a lurking Indian or two? Then do you remember the pasture bars over which you tumbled, and the thud, thud of the first blue or purple berries as they were dropped into your shiny tin pail?

And after the long, long day of picking, do you remember the trip home under the stars, and how you finally tumbled into the big feather bed at grandmother's, too tired to say your prayers? And, next day, the jellies that grandmother and the grown-up aunties and your own blessed mother let you sample in saucers out on the back stoop; and the pies, with thick cream that you had for dinner, and the little berry tarts out in the playhouse under the grape arbor?

One such berry picking stands out most vividly in my mind in these prosaic modern days—one that marked the advent into my life of my first masculine admirer and the date of my first proposal.

He had met us at the gate, this widely grinning, curly headed lad of eight or nine—a very advanced age to me at that time—and had preceded our carriall to the house with lusty heraldings of our arrival. He established himself as my protector and champion even before I had had my white dress and beribboned hat removed and my calico play dress and every-day sunbonnet substituted.

Very obligingly he volunteered to show me a mouse's nest, a hop toad he had that very morning placed in the horse trough, the new piglets. So, in charge of an older cousin, Caroline, who had reached the mature age of ten, we sallied forth to see the wonders and to await the arrival of the rest of the clan for the trip to the berry patch.

We saw the new piggies and our conductor obligingly volunteered to ride the mother for us, but the hired man objected so emphatically that we were unable to view so novel a display of acrobatic skill. We watched our new friend climb to the very highest rafter of the barn—a thing neither of us in all our former visits had ever thought of doing—and gracefully jump off onto the hay below. We watched him swallow whole bunches of green grapes without so much as a gurgle. He showed us how grandfather's threshing machine might run if properly managed. He even showed us how, without holding on, he could slide **backwards** down the long walnut banister in the front hall.

Through such a fine display of gallantry he won our simple confidence, so when he suggested that Caroline and I stand under Aunt Jenny's new black gloria umbrella which we had found in the rack, and let him turn the water from the "horse tank" onto us, we meekly followed to the barn, failing to remember that grandfather's "horse pump" was as hard to stop as it was to start. Finally, as the water poured down upon the umbrella in a torrent, we huddled, not daring to move, until Caroline's scream brought the apparently ever-watchful hired man to the rescue of two bedraggled little girls.

At last came the summons to start and the long, joyous ride, along the dusty road, on the sweet-smelling hay, the regular "plump-plump" of the horses' hoofs quite lost in the rattle of the wheels, the clatter of

the pails, and the gay chatter of the younger relatives, while the older folk more sedately followed in the carryalls and family surreys.

There, cuddled down in the deep prickly comfort of the hay, our feet hanging over the end of the rack, the late manipulator of grandfather's "horse pump" poked me none too gently with his elbow and whispered in as low a tone as could be heard amid the din: "I like you. You didn't scream like *she* did. I'm going to marry you—oh, in six or eight years, and we'll move out west and run a circus. What do you say?"

I hope I blushed properly and coyly whispered my answer, but I do not remember, for at this point our courtship was for the time being postponed.

Then came the berry picking and that delightful scattering into little groups that fostered kindly gossip, good-natured rivalry, and happy laughter as the depths of blue-purple treasure increased.

At first we children sedately followed in the wake of our elders and industriously picked or pretended to pick—but many a plump berry found its way into a hungry mouth. We wondered why our smaller pails were so slow in filling. Then gradually we wandered apart, and, led by the spirit of adventure our masculine companion displayed, we little girls followed him. He found a wood tick and courageously put it behind his ear. He tucked a wee turtle into his pocket. He showed us what in his advanced wisdom he assured us was a rabbit's nest, but the owner had evidently anticipated our visit, for it was vacant. He found a garter snake a foot long and, to our unbounded admiration, he carelessly tossed it about his bare neck and let it squirm about his person, until through our combined pleadings he let it go. He bravely swung from a grape vine over what seemed to us an appalling precipice.

Then, the day being warm and the berries scarce, our gallant hero to our distress suggested "pooling" our berries in one pail and filling the other pails with grasshoppers for the hens. Quite unmindful of our protests, he unfeelingly poured the contents of our berry pails together and was about to hand them back when the inspiration of the day took possession of his inventive mind. Spying the ink-like juice in the bottoms, our ex-friend and protector calmly proceeded to dip his already deeply soiled and stained hands into the remaining liquid, at the same time daring us to do likewise. Moreover, to further encourage us, this young gallant, stirred by further spirit of adventure, proceeded with vigor and evident relish to anoint and re-anoint, adding some of our precious

(Continued on page 347)

## Italians and Carniolans Side by Side in Iowa

By P. Petersen

**I**N the January and February numbers, two of our well known queen breeders state why they prefer Italian and Carniolan bees, respectively. As it happens, both are from the Atlantic states.

As Dr. Miller said, a matter of beekeeping is a matter of locality. Local conditions have much to do with management.

Let me deal with this subject from the standpoint of the midwestern beekeeper, as far as my experience goes.

I started with a strain of good three-banded Italians and also had a few black and hybrid colonies. Since then I have bought queens of good three-banded and leather-colored strains and a smaller number of Carniolans to test the two races thoroughly under the same conditions.

My bees are now practically pure Carniolans. I have a number of different honeyflows, and the Carniolans come nearer getting all of them than the Italians do.

Our first source of surplus honey is the early yellow sweet clover. We usually see the first blossoms on it May 20 to 25, and it is in full bloom by June 1. Honey, water white, delicate spicy flavor, much better than that from common white sweet clover.

The Carniolans are usually ready for the honeyflow by the first of June. The Italians, with the same care, will be ready by the tenth of June.

About that time the flow is on from white and alsike clover, and as long as that lasts I can see little difference in the amount stored by either race. The Carniolans will work on colder and more windy days, but the Italians will bring in more in calm, hot weather.

When the white and alsike flow is over, the bees work on the common white sweet clover. When that yields well Italians bring in more honey in the same time than the Carniolans.

Perhaps it is because the weather in August is usually hot with little wind here. After sweet clover is dried up, I usually have a flow from Hubam, which lasts until killing frost.

It is much like that from the yellow sweet clover, except that the days are short and much cooler than in early summer. Under such conditions the Carniolans are out working earlier and later than the Italians and will store 20 to 25 per cent more in the same time. That is due in part to the fact that they keep the colonies up to full strength later in the season.

Occasionally I get a flow of honey from red clover, perhaps one year out of three, and sometimes I get a little from Spanish needle. The Carniolans will store most from red clover. With Spanish needle there is little difference.

There is still one factor I believe is important. The Carniolan is stronger and swifter on the wing and can go a greater distance than the Italian under the same conditions. I have found mine at work on the field three or four miles from home on yellow sweet clover. That means that they can be kept in larger apiaries with less work than in smaller out-apiaries.

My average per colony crops while I have kept Carniolans has been as follows: 1926, 128 pounds; 1927, 152 pounds; 1928, 165 pounds; 1929, 176 pounds; 1930, 98 pounds.

The last year there was no honey-flow after July 20 because of the drouth.

I hope someone will thoroughly treat this subject from the point of view of the Italian queen breeder in the central West. We cannot learn too much about the different races of bees.

## A Single Bee Would Work Eight Years for a Pound of Honey

A single pound of honey represents the lives of approximately three hundred bees, according to Dr. O. W. Park of the Iowa Experiment Station. "If it were possible for a single bee to gather enough nectar to produce a pound of honey, she would need to work all day long, 365 days in the year, for more than eight (8) years to accomplish the feat. To gather the necessary nectar this bee would travel approximately 75,000 miles, or three times around the earth."—From Radio Talk No. 1, Iowa State College.

## Taxes That Discriminate

On page 126 is a statement "Something more to tax." Here in Arkansas we pay a special tax of 10 cents on each colony of bees. Now I want to ask why not tax hoarded grain and provisions hoarded in cold storage?

Here in Arkansas a law was passed a few years ago that a manufacturer of fiber should be exempted from taxation for seven years. Why exempt the cotton factory and not exempt the cotton farmer?

M. E. Ketcham, Arkansas.

## The Transparent Cellulose Paper Wrapper for Comb Honey

By R. B. Manley

**M**R. KILLION'S notes on page 61 are rather interesting as showing that this method of wrapping comb honey for presentation to the consumer is becoming popular in America as well as in this country.

It is only fair, however, to point out that the name "Cellophane" is simply a trade name for one particular manufacturing firm's product, just as the name "Kodak" is the name of the product of one particular firm of roll-film camera. There are other makes of cellulose paper besides "Cellophane" which are just as good and can be obtained at much lower prices. The make which I use is, as far as I can see, in every way equal to "Cellophane" and is much cheaper. I am able to buy, in thousands, sheets cut the right size, which is  $13 \times 7 \frac{1}{2}$  inches, at 15/10, or about \$4.00 of your money; that is five sheets for 2 cents. I dare say it would be dearer with you because there is pretty sure to be some duty on it to make it so. The trade name of this product is "Sidac"—in full, "Sidac silverine insoluble transparent paper."

The cellulose paper wrapper has certain very great advantages over most other forms of pack. One of the greatest is that, should a comb so wrapped break on the journey to the customer, the wrap is strong enough and sufficiently impermeable to honey so that the mess is almost always prevented from escaping and spoiling the other honey in the same crate.

The writer now always wraps all sections in cellulose paper as soon as possible after they are off the hives; then, if customers wish to have the combs delivered in cartons, the sections are put into cartons with the wrappers on them. The cost of carton and wrapper together is quite small when a considerable quantity is bought, not amounting, in free trade England at any rate, to more than about 8 pence a dozen sections, or say 15 or 16 cents.

I have seen several samples of printed cellulose wraps, mostly American, and I must say that I have yet to see one that seemed to me to improve the appearance of the honey. After all, what is more beautiful than a section? Surely that kind of decoration is akin to "painting the lily." If the idea is to hide the defects of poor combs, that is quite a different question. It is, I think, very doubtful if that kind of thing is worth while. The public soon get wise to dodges of that kind; in fact, as our editor says, they are not caught twice in that way.

The plain wrapper has the advantages that it costs less and is the honestest package extant for comb honey, for every cell can be seen.

In England the best class of retailer will usually not accept comb honey at all unless it is either wrapped, cartoned or glassed. Of course, with English honey selling retail at from 24 to 30 cents per section, we can afford to spend a little on it, or so it may seem at first sight to an American. But is it really so? I doubt it. The harder it is to sell any product, the better it pays to present it in the best possible manner.

I have thought at times that a band of black or other suitably colored paper 17 inches by the width of the section, with a label printed so as to come at the top of the section, would look attractive and would cover the wood of the section, which is not always as clean as one could wish. I have seen that very idea lately put forward in one of our English bee papers. England.

### Contests to Increase Interest in Honey

The beekeepers of San Diego County, California, lead the procession in the matter of interesting children and young people in bees and honey. An essay contest is an annual feature in connection with the county fair. This year three five-gallon cans of honey were offered as prizes in three different divisions of the contest. When the high-grade quality of San Diego County honey is taken into consideration, these prizes are seen to be well worth striving for.

This matter of essay contests was spoken of in these columns a year ago, and inquiries were sent to the writer from as far east as the Atlantic Coast. Since this is only a brief report of what others have done, no credit is due to anyone except to those who have planned and carried out the work. For the benefit of those who have expressed an interest in contests of this kind, the suggestion is made that the officials of San Diego County would no doubt give courteous consideration to inquiries. This is said, however, without authority.

But, after all, the main problem in connection with any kind of public exhibit, or demonstration, is to find the person who has the energy and perseverance to plan the work and then go ahead with it until it is finished. About all that a person of that kind needs is the suggestion that a certain thing has been done, or

should be done, and pretty soon the deed will be an accomplished fact.

While the writer has not had personal experience with essay contests, he has conducted other kinds of contests in connection with honey exhibits. For example, a guessing contest was conducted in connection with a honey exhibit that was made in a grocery store. The exhibit filled the entire corner of the store room, with two large plate-glass windows looking on the most prominent business corner of the city where it was held. The exhibit continued for a week. Two cans of honey, a ten-pound can and a five-pound can, were offered free of charge to the best guessers. A full-depth extracting comb was placed on display and the object was to guess the number of cells in the comb. Ten pounds of fine honey was offered as a prize to the person who could guess the exact number of cells in the comb and five pounds to the person who came closest to the exact number.

The extracting comb was a new one, white as snow. It was built on a full sheet of foundation wired in a new Langstroth frame. The wood was carefully scraped, so that no stains of propolis showed, and the cells were as clean and dry as the bees could make them. Along with this empty comb was another exactly like it, except that it was filled with white honey, sealed to the wood on every side. The combs were things of beauty to all who examined them, and there were hundreds who did examine them to find out how many cells there were in the empty comb. No one was allowed to touch or handle the combs and no one was allowed to use a rule on the comb, but all questions, except those in connection with the number of cells, were answered as fully and simply as possible.

It was a pretty safe bet that no one would guess the exact number of cells, so there was no great risk in offering to give away ten pounds of honey for a guess of that kind. The person who guessed closest to the right number was a high school teacher, who used his mechanical eye and mathematical head in making his guess; and he came mighty close to getting ten pounds of honey for his effort.

Each person was allowed to make as many guesses as he wished, and by the end of the week the ballot box was well loaded with slips of paper containing names and numbers. Old and young alike made a try for the prizes. Some of them came back five or six times to be sure they got the matter straight. One woman said she dreamed about the contest, and came back next day to make a new guess. Children almost blockaded the store after school let out. The store-keeper not only did not object to giving the space free of charge, but was one of the most interested observers

of the exhibit, spending most of his spare time looking at the live bees in the observation hive and asking questions about bees and honey. The same was true of the clerks in the store. They seemed to be thinking up questions to ask, and when business was slack they flocked around the beekeeper and asked him. The answering of the hundreds of questions got to be hard labor before the end of the week. R. B. McCain.

### One Quick Way to Dispose of Disease

By E. S. Miller

In disease-infested areas frequent inspection of bees is important, but in handling combs care must be used to avoid exposing them to stray robbers. Brood or honey should not be touched by the hands or hive tool. The practice of some beekeepers of poking into diseased or doubtful cells with the hive tool is not to be commended. The best way of disposing of a colony infected with American foulbrood is to kill the bees and burn the combs. It may be done in the following manner:

Close the entrance carefully, pour into the hive and upon the bees about a pint of gasoline and close the hive. Every bee coming in contact with the gasoline will be killed instantly and all others will be quickly overcome by the fumes. Next, in some open space, dig a saucer-shaped hole in the ground about a foot or so in depth and about three feet in diameter. Place two or three combs in the hole thus dug and pour on some gasoline. Now stand back several feet and toss in a lighted match. The other combs may now be added to the fire, and, lastly, the hive, either to be scorched out or burned. After the mass is burned down it must be covered, the hole being filled up with earth. Great care should be used to avoid the escape of any bees or the dripping of any honey on the grass or elsewhere accessible to flying bees. Remember, also, that trying to save any infected combs is a most expensive proceeding.

Indiana.

### Tupelo a Native Tree

Our attention has been called to an apparent error in the article by J. J. Wilder in the April issue. A well known botanist reminds us that the tupelo is a native American tree, and is not found in Africa, as Wilder's article would indicate.

### Colorado Report

The report of apiary inspection for Colorado for 1930 shows that disease was found in less than three per cent of the colonies examined and that inspection was done at a cost of slightly more than eleven cents per colony.

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## THE EDITOR'S ANSWERS

When stamp is enclosed, the editor will answer questions by mail. Since we have far more questions than we can print in the space available, several months sometimes elapse before answers appear.

### CLIPPING QUEEN'S WINGS

Is it safe to clip the wing of a queen when she leads a second swarm, nine days after the first one has issued, destroy all remaining queen-cells and return the swarm to the hive? Have young queens been fertilized before they take out a second swarm?

I bought twenty-one colonies in old and dilapidated hives; transferred them, putting brood above and in lower body with two frames drawn out and balance full foundation. I introduced new queens by A's plan, of whom I buy my queens. Ten out of twenty-five have disappeared. I never lost any before in introducing them. What was my mistake? Was it in not leaving some brood with the queens? An early answer will be gratefully received.

MISSOURI.

Answer—1. Usually the young queen is not yet fertilized when the second swarm issues, and she may not be fertilized for two or three days afterwards. So it would be a mistake to clip her wings. Do not clip the wings of a queen till you know she is laying.

2. We do not know the method which you tried. We recommend introducing a queen by the cage method, keeping her caged in the center of the hive for forty-eight hours, then releasing her by letting the bees eat their way to her through candy or through a piece of comb honey. But you can introduce a queen safely by putting her in a hive with only hatching brood. This is not always convenient.

### USING TRANSFERRED BOX-HIVE FOR SUPER

I transferred my bees from an immovable frame hive to a movable frame hive by placing the movable frame hive above it, about a month ago. The queen moved into it and I waited until it was pretty well filled with brood and honey before I set it on the bottom board. I then put an empty super with frames and foundation on top of the brood body; then I put an excluder, and lastly I put the hive with crooked combs. This was three weeks ago. Would you let the bees fill the comb with honey or remove it now and cut out what honey there is? What can I do with the old combs?

WISCONSIN.

Answer—It seems advisable to remove that immovable comb hive before the bees fill its combs with honey, if not already filled. The only requirement that I would see would be that the brood be all hatched. If you remove that hive and use supers, the honey that they will store will be that much more easy to sell.

The combs of that hive may be preserved and transferred into frames, when the weather is cool, to be used later. Of course they must be fumigated against the moths, and all the crooked combs and drone-combs rendered into wax. But the good worker-comb, unless very old, is better than that much comb foundation. If properly transferred and given to the bees, they will fasten them in the frames in a very short time.

### POOR STORING BY COLONY THAT SWARMED

I have twelve colonies of bees, and was putting the second super on all the hives when I noticed one hive did not have any honey in the first super I put on a month or so ago. What could have been the cause? There are lots of bees in the hive just the same. The frames are all filled with honey. That swarm swarmed once this summer.

WISCONSIN.

Answer—The fact that this colony swarmed is probably the answer to your question. It is impossible for a colony that swarms to make as much honey, all other things being equal, as one of the same strength that does not swarm. The bees that go with the swarm take away just that much strength from the colony.

### KEEPING OBSERVATION HIVE ON MOTHER COLONY

1. Would it be practical to place the observation hive over the parent hive if the separation were made three weeks ago? I have a queen in the observation hive.

2. Would the two queens get along O.K. if I placed a queen excluder between the two hives?

3. How long can a hive be divided and the bees be united again?

NEBRASKA.

Answer—1. I have never tried to keep an observation hive on top of the mother colony, but I have no doubt it could be kept there if it was done at the time of the division and a queen excluder was placed between the two. It is worth trying, although I prefer having the observation hive close to the house, or even on the porch, handy for the house folks and the visitors.

2. Yes, I believe they would.

3. After three or four days the bees will be rather strange to each other. After three weeks they will be perfect strangers, I believe. In a good honey season there is very little danger of fighting. But if you move either hive you will lose some bees, for they become accustomed to their new position.

### MAKING INCREASE FROM DEMAREED COLONIES

I have twenty colonies of bees that I kept from swarming by the Demaree method. Now I want to make some increase, and would like to know how to go about it, and when is the best time?

TENNESSEE.

Answer—I have never practiced the Demaree method, although I know it is a good method, with small hives. But our hives are large and we have but little swarming.

Some of our modern educators assert that the bees will often rear a young queen in the upper story when the lower story and the upper brood chamber are separated by at least one super. In that case the thing is simple. Just remove the lower story with its queen and all the bees that it contains, and place the upper story with its young queen on the stand of the old hive. Of course, in order to have the young queen fertilized, it would have been necessary to have an entrance to the upper story, so she might take her wedding flight.

If you have not reared any young queens in the upper story, it will be necessary to divide in some other manner. In that case, at the end of three weeks there is no longer any brood upstairs and you must divide the brood in the lower chamber. This should be attended to before the end of the honey crop, and it would be best to have some queens on hand to give to the queenless colony. Usually we remove the queen and a part of the brood to a new spot and leave the new queen with the rest of the brood on the old spot. Do not make any divisions at any other time than during the honeyflow.

## SOUR HONEY FROM KEEPING HIVE IN A DAMP PLACE

1. Last November I lost a hive of bees; they left about fifteen or twenty pounds of honey and some young larvae, and no disease as I could find. I nailed up the entrance tight and then put hive in a barn; the barn has a dirt floor. I put this hive on some pieces about fifteen inches from the ground. Today I needed the hive to put a new swarm in, and to my surprise when I opened it I found it smelled sour. Is the comb and honey which is in this hive any good or fit for anything? I have two more hives which may swarm any day and I will need this hive and comb.

2. I put on one super to each hive about the last week in April and the bees had them about filled in three weeks, but not capped over. I then put another super under it and the bees did not seal the first super over, and I find that they have filled some of the No. 2 super frames, and they are not sealed either. If they do not seal it all, will it do?

NORTH CAROLINA.

Answer—1. The best plan is to put that hive on top of one of your colonies. The bees will care for it and will probably use that honey for breeding. If you have a colony which does not appear to do very well, give them that hive to care for. It will induce them to work. Be sure and don't give it to a very weak colony in time of scarcity, as it might induce others to rob them. You have been punished for keeping a hive full of honey in a damp place. Don't do it again.

2. You have put the second super on too soon, perhaps. Yet, by the time that you read this, the bees may fill both. It is very early in the season and there is plenty of time for them to be filled. You should own an extractor, to extract the honey that is not capped over when fall comes. That is the best way to overcome the difficulty when you have unsealed combs. You may also use them to feed the destitute colonies, if you have any.

## HOW TO MAKE A SOLAR WAX EXTRACTOR

Could you please send me information as to how solar wax extractor is made?

MASSACHUSETTS.

Answer—The solar wax extractor is a slightly sloping, flat tin receptacle with an opening for the escape of the melted wax. It is covered with a glass cover, which causes the wax in the combs to melt and run down. The cover is only two or three inches above the receptacle, so that the heat is confined within.

The only trouble about the solar wax extractor is that the wax is not pressed out of the residue, and if the combs are old they often absorb most of the wax. But for small bits of burr-combs and for newly built combs that do not contain any great quantity of what is commonly called "slumgum," it is excellent.

## DO BEES "SULK" WHEN DEQUEENED FOR SWARM PREVENTION?

For swarm prevention, I have recently caged the queen in the hive for ten days, then removed her and introduced a young laying queen successfully about five days ago. While the queen was caged, and after the young queen was introduced, the bees have been "sulking," notwithstanding the fact that we are in the midst of a white clover honeyflow. I raised the hive body on four half-inch blocks, as recommended, but the bees continue to be idlers and cluster underneath the frames, and apparently few of them go to the fields. During the ten-day queenless period I twice cut out all queen-cells. An examination of the comb honey super shows but little work done there. This is apparently my strongest colony and I would like to put the bees to work while the honeyflow is on. Will you tell me how I can put some "pep" into these bees and make them go to work?

VIRGINIA.

Answer—Bees do not usually sulk in the

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circumstances that you relate. So we can only guess. I will give you two guesses and let you do the rest of the guessing:

1. You may have overlooked one queen-cell when you removed them, and the bees swarmed with the young queen. But as only the old bees are gone and young ones hatch every day, it does not look as if any were missing; only it is perceptible that they do not fly as usual and of course do not bring honey as usual.

2. The stopping of the laying causes cells to become empty in the brood chamber, and the bees store the surplus which they gather in those cells, apparently sulking because they do not fill the supers. In that case you must find a large amount of honey in the brood combs.

**WHAT ARE "BAIT" SECTIONS?**

1. I see it mentioned in the American Bee Journal about bait sections. Could you explain what it means? Also please inform me as to the best method to induce bees to work in sections. The bees here don't want to put honey in sections.

2. What kind of container would you advise for chunk honey. Does the demand seem to be good for it in your country?

MANITOBA.

Answer—1. Bait sections are sections in which honey was put by the bees the year before, but which were not sufficiently finished to be salable. These sections, kept over, make a very good bait to induce the bees to work in the supers.

2. Chunk honey may be put into any tin cans or cans. Place it tight in the cans and then fill the empty spaces with extracted honey. You may even put it in glass jars, but in that case you must be very careful to arrange it so it will show well in the jar. The demand for chunk honey is good.

**MAKING DIVIDES**

1. I have two colonies of bees and ten empty hives. The two colonies are very strong in bees and I wish to divide them and fill some of the empty hives. Would it be all right to take the queen along with a frame or two of brood and put her in another hive, then leave the parent hive for eight or ten days and, after queen-cells are started, divide this into two or three nuclei?

2. Would there likely be enough drones for the queens to mate? I have frames and some combs and foundation, but, owing to circumstances, cannot afford to buy package bees or other equipment this season and wish to expand my apiary this year as much as possible, ready for next season. There are no other bees nearer than two miles.

3. What time would be best to divide? The main honeyflow is about June 15.

NEW YORK.

Answer—1. The method you propose to use is good, provided you bear in mind that all the old bees who are accustomed to fly out will come back to the old stand. It is therefore important that you supply the hive in which you will place the queen with enough young bees to take care of the brood. The same may be said of the nuclei which you will make. The one remaining on the old stand will get most of the flying bees. For that reason you must use considerable care and judgment in making your divisions or some of the colonies will become strong at the expense of the others.

2. Drones will not be lacking if your colonies are as strong as you appear to believe. If there are no drones, it may be advisable to delay making the divisions until there are some. But drones from two miles away are likely to find your young queens when they go out to mate.

3. I would not advise you to divide before the beginning of the main honeyflow. That varies according to circumstances and the weather.

**AGAIN—NO EXCLUDERS**

On page 182 of your April issue, under the caption "Queen Excluders," you say "We do not use any excluders in our apiaries."

1. If just as good results can be obtained by not using an excluder as by using one, why use the excluder? In running for extracted honey, is it not a fact that the queen will confine her egg laying to the upper hives, or supers, and not use the lower, or brood hive? Or, will she use the lower or brood hive for egg laying about as much as the upper hives, or supers?

Does brood rearing in the comb have any effect on honey later put there by the bees and removed for extracting? Or should brood hives be kept separate from the hives (supers) used for extracted honey? Of course, if you do not use excluders it can only be assumed that brood rearing does not have any effect on honey that may later be put into such comb and later extracted.

WASHINGTON.

Answer—1. We use larger brood chambers than the average. The Modified Dadant hive has combs about two inches deeper than the standard Langstroth; therefore the queens do not move so readily into the upper stories. If our queens made it a practice to go up into the supers for laying, we would feel compelled to use excluders.

2. The queens breed so little in the supers that this matter is not a consideration for us. The production of brood in the extracting supers would not endanger the color of the honey. But we never extract honey from brood combs.

**WHAT IS "CHUNK HONEY"?**

What is chunk honey?

KANSAS.

Answer—Chunk honey is honey which is cut out in chunks, from the combs, as contrasted with section honey, which is sold in the section.

Chunk honey, with some people, is more favorably received than section honey, because a great many people imagine that section honey is manufactured artificially and has never been gathered by bees. This foolish belief is due to a scientist, some eighty years ago, writing that people manufactured honey, put it in the combs and sealed it over by machinery. When he was asked about it, he said that he had written this only as a scientific pleasure and that he knew that it was not so. But so many people are fond of believing the impossible that the story went the rounds of the press and there are many people who still believe it.

If combs of honey could be manufactured, they would be as much alike as two cakes of soap. But there are no two combs alike, no more than there are two men alike. Still, chunk honey sells well.

**How to Granulate Honey from Starter**

Heat the honey rapidly to 160 degrees to kill the yeasts. Cool rapidly to 50 degrees. Granulate by alternate warming and cooling and grind the granulated product very finely. Add two parts of this ground mixture to ten parts of honey which has been previously heated to 160 degrees and cooled. Granulate the same as before by alternate heating and cooling. The product is very much improved by this treatment. The rapid heating and cooling does not injure the quality.

Harold Sheppard, Kansas.

## American Honey Institute

(Continued from page 331)

Honey Week as a feature program. What are you doing to enlist their interest?

Home service directors like to tie up their demonstrations with seasonal events. Are you seeing to it that every one of your local persons engaged in the type of work is being informed of the dates of National Honey Week? The earlier you start,

the better your program during National Honey Week.

### Those Summer Field Meets

And when your beekeepers get together for a summer field meet, picnic, chautauqua or county or town meeting, include a discussion and program to get organized for cooperative effort during National Honey Week. Now is the time to prepare for the program that will be given during National Honey Week, November 9 to 14.

## MEETINGS AND EVENTS

Current association meetings and organization notices are published in this department each month. Secretaries and other officers of organizations who wish publicity here should make sure that notices are sent in before the fifteenth of the month preceding publication. Frequently notices are received too late for use and consequently do not appear at all.

### Good Prospects for Honey Exhibits in Missouri — Special Prizes,

#### Strong Premium List

The Apiary Department of the Missouri State Fair this year was fortunate in securing two fine judges in A. G. Woodman, of Grand Rapids, Michigan, and Miss Malitta D. Fischer, of the American Honey Institute, the latter to judge the honey cookery exhibits. The reserve judges are Miss Essie M. Heyle, state home demonstration agent, Columbia, and Rev. Francis Jager, St. Bonifacius, Minnesota.

In addition to the \$500 in cash prizes, the superintendent secured \$117.25 in merchandise prizes, making it worth while to exhibit.

In the general display of apiary products class, the exhibitors will furnish their own tables, five feet square and thirty inches high, and have the privilege of pyramiding their exhibit, with at least 250 pounds of honey in an individual display. This should increase the volume and allow each exhibitor to use originality.

First prize in this class is \$33.00 and five ten-frame, metal-covered hives. The second prize is \$28.00 and one hundred sheets of Dadant's improved crimp-wired foundation.

We have three special prizes for exhibitors putting up the most pounds of honey to compete for other prizes. We have four special prizes for the exhibitors coming the most miles to exhibit, and we have a special prize for the lady winning the most ribbons in the "Honey Cookery" department. The prizes on fruits and other foods canned with honey and on honey cakes have also been increased.

Clay T. Davis,  
Supt. Apiary Dep't,  
Missouri State Fair.

### Honey Producers Meet at Greeley

The annual field meet of the Colorado Honey Producers' Association

was held at Island Grove Park in Greeley, Saturday, June 13, with members from Wyoming, Colorado and Nebraska in attendance.

C. L. Corkins, of the University of Wyoming at Laramie, spoke on "Wintering Bees." R. G. Richmond, of the Colorado Agricultural College, talked on "Spring Manipulation." Frank G. Rauchfuss discussed "Re-queening," and Mrs. L. R. Rice, Mrs. W. T. Brandt and Mrs. W. C. Evans discussed "Different Uses of Our Oldest Sweet."

In addition to this session, there was a program of games, sports and contests.

J. B. Dillon.

### Missouri State Association to Meet Wednesday, August 20

The Missouri State Association will meet on Wednesday, August 20, with Miss Malitta D. Fischer, of the American Honey Institute, as the principal speaker.

### Maryland Meeting July 18 at Centerville

The July meeting of the Maryland State Beekeepers' Association will be held at the home of the president, A. Howard Johnson, at Centerville, Maryland, July 18. The principal speaker will be Mr. George H. Rea, on "Experiences in the Production of Package Bees on the Eastern Shore." Ernest N. Cory, Secretary.

### WOS (Jefferson City, Missouri) to Feature Apiary Department of State Fair

The Apiary Department of the Missouri State Fair is to be featured in a ten-minute radio talk over WOS at Jefferson City on July 10 at 8 p. m. Clay T. Davis, superintendent of the Apiary Department, will broadcast.

Elsewhere in this issue we have notice of the increased prizes and the judges for this year's exhibits at the state fair. With continued favorable

weather, there should be the finest honey show in Missouri's history the present season.

### Beekeeping News from Illinois

Beekeeping interest in Illinois seems to be on the advance, if organization of new county associations is any indication. Morgan-Scott County Association was organized in December, 1930, while already in 1931 the beekeepers of Ford County, Macon County and LaSalle-Bureau counties have organized their respective associations. The most recent addition to the list was that of the newly organized Shelby County Association. Beekeepers of Douglas County are contemplating an organization. In most cases the formation of the association is for the principal purpose of securing organized inspection work, but many profitable and instructive meetings are being held.

While no extended state tour will be held this year, a number of county associations are planning on individual county tours. Those who have already indicated possibilities are Peoria County and Iroquois County.

There seems to be increased interest in the apiary exhibit at the state fair, as indicated by the number of inquiries for the premium list. The apiary products of wax and honey will be shown to better advantage this year, since they are to occupy a space in the new Governor Emmerson Building, in which the food and culinary exhibit and the state fair's cooking school are to be located. The inclusion of honey cakes, cookies and candies in the culinary exhibit for the second time this year should attract more attention.

### North Dakota Meeting at Aneta July 15

The annual summer meeting of the North Dakota Beekeepers' Association will be held at Aneta, Nelson County, July 15. The program is being planned to include practical talks on various phases of apiary management and should be of interest to every beekeeper. The Commercial Club of Aneta and local beekeepers of that city are making plans for the entertainment of all beekeepers who attend. Good graveled highways lead to Aneta and it is expected that there will be a fine, large attendance from the surrounding territory. Come and bring your problems with you. Remember the date, July 15, at Aneta, and join in this annual beekeepers' meeting.

### Krebs to California

Word has recently come to this office telling of the resignation of H. M. Krebs, chief apiary inspector of Michigan, to accept a similar position in California. Michigan has recently undertaken an elaborate cleanup of bee diseases, with wholesale

destruction of diseased colonies. Material reduction in the percentage of disease is reported as a result of this work. Krebs was selected for the California position as a result of his work in Michigan.

#### Shelby County (Illinois) Organizes Association

On May 23, Shelby County beekeepers got together and organized an association with an initial membership of fourteen and with a spirit that the secretary reports will put that county on the map in beekeeping.

The officers are as follows: President, Frank Koontz, Stewardson; vice-president, John Haslin, Moweaqua; secretary-treasurer, C. E. Hill, Windsor.

All hail to the new group.

#### Massachusetts Farm and Home Week

Mr. C. L. Farrar, assistant professor of entomology and beekeeping at Amherst, Massachusetts, announces the Massachusetts Farm and Home Week beekeepers' meeting scheduled for Friday, July 31. Among other speakers are announced Prof. V. G. Milum, University of Illinois; Dr. J. H. Merrill, of Raynham Center, Massachusetts, and Mr. C. H. Gould, of Haydenville, Massachusetts.

We understand Mr. Milum is also scheduled to address the Connecticut meeting on August 4.

#### Sheppard Retired in British Columbia

W. J. Sheppard, provincial apiarist of British Columbia, was lately retired on short notice. As the Government of British Columbia appeared to be well pleased with his services, it is difficult to understand the reason of so short a notice for his retirement. A letter from him published in the June number of the "Beekeeper" of Peterboro, Ontario, shows his disappointment and displeasure.

#### The Bee Kingdom League

The Bee Kingdom League, organized by A. Z. Abushady, who was also the founder of the Apis Club, is an international society with headquarters in the ancient city of Cairo, Egypt. The annual conference was held at Cairo in February with many notable men of that country in attendance. Representatives were also present from Germany, Italy, Greece and Britain. Altogether, more than five hundred organizations were represented.

From published accounts, the occasion seems to have been a most enjoyable one. Dr. Abushady is to be congratulated on his great vision of better understanding between the different nations of the world through a common interest in bee culture.

#### Doings in the Northwest

(Continued from page 325)

colonies this season. He states that there are several species of nectar-producing plants in the valley and that, due to the extremely long days of spring and summer, bees build up very rapidly and gather much more nectar in a day than do the bees in the States, where there are fewer hours of daylight. Winter conditions in the Matanuska Valley are mild, states Mr. Friesen, and he hopes to be able to bring bees through the long flowerless period in good condition.

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#### Watson Reports Prices Have Tumbled

During March and April, Mr. Harry Watson, sales manager of the Mountain States Honey Producers' Association, covered almost the entire territory west of the Mississippi River. From Seattle and Portland, Mr. Watson went to San Francisco and Los Angeles, thence to Butte, Billings, Cheyenne, Denver, Sioux City, Kansas City, Tulsa, Dallas, Salt Lake City, Boise, La Grande, Astoria, and back to Seattle. On May 1 he left Seattle again for San Francisco and Los Angeles.

"Marketing conditions in this entire territory are rotten," Mr. Watson announced. "Prices for five-pound pails are down to as low as thirty cents retail in some districts, with forty cents not uncommon. One beekeeper delivered nine five-gallon cans of honey—water-white grade—to a bakery for four cents per pound. Kansas City prices are a trifle above the average, with the only bright spots being in Texas and Oklahoma."

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#### Kjosness Reports Increase in Demand

A letter to members of the Mountain States Honey Producers' Association from Manager Kjosness announces a very favorable increase in demand for honey evidenced during April. With the 1930 crop of honey in Germany practically cleaned up, and credit conditions in England, France and Germany much improved, American brokers are receiving numerous inquiries from foreign buyers, Mr. Kjosness states. Reports indicate that there is less honey on hand in the United States and in the world than at any time during the last twelve years, and Mr. Kjosness anticipates a steady increase in demand for American honey, with gradually rising prices, during the summer.

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#### Mayo Reports Low Prices in Northwest Markets

Mr. Mayo, of Mayo & Miller, beekeepers of Puyallup, Washington, reports very low prices for honey in Northwest markets. Mr. Mayo has visited the principal buyers of honey in Puget Sound cities and states that

during February and March five-pound pails were being offered to the trade at from \$4.50 to \$4.80 per dozen. Competition, states Mr. Mayo, is very keen, but because of the high quality of their honey, principally fireweed, Mayo & Miller have been able to secure the top figure. Mr. Mayo believes that he and his partner can produce honey as efficiently as the majority of beekeepers, and, although there is little profit in beekeeping for them, they feel confident that marketing conditions will improve in the near future.

#### The Standard Cage

The United States Department of Agriculture has recently issued specifications for a standard cage for shipping live bees. This recommendation has been issued after an extended study of the shipping business and combines the best features of the various cages in common use.

The work has been done at the Southern States Field Station at Baton Rouge, Louisiana, and prepared by Warren Whitcomb, Jr. Three types of cages are recognized: the combless cage, for live bees without combs; the nucleus cage, for shipments of one or more frames of brood and honey with adhering bees, and the comb cage, which is designed to accommodate one or more pounds of additional bees together with the usual nucleus.

Specific instructions are given for the selection of material and the making of cages, with exact size for each part. Since every shipper has developed a cage to meet his own particular requirements, it is too much to expect that all will adopt the new standard cage at once. The recommendations, however, will serve a very useful purpose and will probably result in a gradual reduction in the number of different kinds of cages in common use.

It is quite probable that the general adoption of a standard cage would have a favorable effect on the express rates. If the carriers had only one type of cage to handle, it would simplify their problems.

#### Pennsylvania Bulletin

The Pennsylvania Department of Agriculture has recently issued General Bulletin No. 499, entitled "Ariary Inspection in Pennsylvania," written by H. B. Kirk, chief apriary inspector.

The bulletin is well illustrated and covers the problems of inspection, including the transferring of bees, recognition of disease and disposition of affected colonies. Copies may be secured from the department at Harrisburg.

## California Redwood for Bee-Hives

I have often noticed the advertisement, "Cypress, the wood eternal." I have never used cypress in bee-hives, but after reading two articles I am convinced that for durability it is hard to beat. The articles referred to are comments on the comparative lasting quality of poplar, pine and cypress, in "Editor's Answers," page 76, February number, and that of G. J. Fifield, "Lasting Qualities of Wood," in the April issue, page 167.

How it compares to cypress I do not know, but I wish to present some evidence as to the lasting quality of California redwood. The writer has a hive with bottom board nailed on, cover and frames. It is made of redwood, has never been painted, has the original cut nails still in it, and a few wire nails I put in to hold it together. It is in a good state of preservation. Even the bottom board that has been setting on the ground all these years shows little signs of decay. On the end cleat of the cover this inscription is carved with a jack-knife: "L. J.—1886—June."

Mr. A. L. Jacobs, retired apiarist, is the man who did the carving. He stated that it was in the apiary of Joe Bailey, long deceased. He said that many of the hives and other equipment Mr. Bailey was using were over twenty years old at that time. But if it was all new then, I submit that forty-five years is a long time for any wood to last under those conditions. Fred A. Parker, California.

## Canada Grading Rules

The Canadian Department of Agriculture at Ottawa has recently announced grading regulations for honey sold on the domestic markets of Canada. Four classes are recognized: Class one, white; class two, golden; class three, amber, and class four, dark. Three grades are recognized in each of these classes: Fancy, choice, and that used by manufacturers.

To give the details of the grading rules would require more space than is at present available, but readers who are interested should write to C. B. Gooderham, Provincial Apiarist, Department of Agriculture, Ottawa, Canada, and ask for copies of the honey grading regulations.

Mr. Joseph Carrel, located at Friebourg, Alberta, Canada, writes that on May 6 they are having a severe drought and that dust storms are carrying away the finely pulverized soil. Wheat is selling at 25 cents per bushel.

Bees have wintered in the cellars satisfactorily, but prospects for honey are not at all flattering.



### DISPLAY YOUR HONEY PERFECTLY

*Dependable Service on Standard Sizes*

Our fluted honey jars are made as per specifications of Standardization Committee of the American Honey Producers' League

*Distributed by*

**DADANT & SONS, HAMILTON, ILLINOIS**

*and*

**G. B. LEWIS CO., WATERTOWN, WIS.**

*For Michigan*

**A. G. WOODMAN COMPANY, GRAND RAPIDS, MICH.**

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**HART**  
**BOTTLES & JARS**

## Now! Cutts Queens Cost No More

Why tolerate poor queens or take chances by ordering from unknown breeders when you can buy a Cutts queen for 50 cents, or one hundred for \$40.00?

**J. M. CUTTS & SONS**

**Rural Route No. 1**

**MONTGOMERY, ALA.**

**Select Young Italian Queens****Prompt Service No Disease Satisfaction Assured**

For every 10 queens we give you one extra queen free

Beautiful Italians — All young 1931 stock  
50c each — 50 or more, 45c each**P. M. WILLIAMS, Mount Willing, Alabama****Yancey Hustler Queens** Three-Band  
Italians

40c EACH BY THE HUNDRED; ONE TO NINE, 50c EACH; TEN OR MORE, 45c EACH

2-lb. package with queen — \$2.00

3-lb. package with queen — 2.50

WE GUARANTEE TO PLEASE YOU ON EVERYTHING

**CANEY VALLEY APIARIES** — BAY CITY, TEXAS**ROOT SERVICE  
FROM  
CHICAGO**

YOU NOW WANT SUPPLIES

**QUICKLY**

Then send your orders where a large, complete stock is ready for you. New carloads of supplies are arriving. We will give you what you want, when you want it.

Our new container price list is now ready for you, listing the most complete line of containers offered anywhere. Sent on request.

**A. I. ROOT CO., OF CHICAGO**  
224 W. Huron Street, CHICAGO, ILL.**Mention the American Bee Journal When Writing Advertisers****ITALIAN QUEENS**  
**3 for \$1.00**

We guarantee to fill your order promptly and that the queens will please you. All are vigorous, young, laying queens guaranteed to be purely mated and to be as good as the BEST.

**SOUTHLAND APIARIES**  
**NATCHEZ, MISS.****Our Fall  
Price List  
Is Yours for  
the Asking****♦** Dadant's fall price list is now ready for mail. Get your copy early.**♦** It lists comb honey packages, packages for honey, honey handling equipment, honey selling helps, labels, shipping cases.**♦** If you need anything for harvesting or selling your crop, we have it.**♦** Send for a complete copy of our fall price list to Dadant & Sons, Hamilton, Illinois.

## Berry Picking Time Brought My First Proposal

(Continued from page 337)

berries to the mixture, not only his hands and arms, but his cheeks and chin. Then noting our wild-eyed horror or perhaps mistaking it for some inexpressible admiration on our part, this enterprising youth proceeded with whole handfuls of our beautiful berries to rub, and rub vigorously, not only his hands and arms, cheeks and chin, but his whole face, neck, ears, hair, over and over again, grinning at us wickedly and daring and double-daring us to do likewise.

In my five-year-old terror I was powerless to speak, and even today I can remember how he looked. That intense purple-violet colored countenance, the golden curls with their more lavender hues, the wide blue eyes that looked horribly green and ghastly out of the vivid depths of that round, glowing face; the grinning, gapping mouth, the teeth! No nightmare at midnight with all its horror could quite equal it; no modernistic art could rival it!

He triple dared, he commanded, he threatened us. He vowed he would never marry me, NEVER. He would marry Caroline; and Caroline, thus encouraged, began gingerly to dabble this novel cosmetic delicately on her pink cheeks and chin, when, filled with some spirit of the original cave man, this purple-tinted villain, our erstwhile cavalier, rushed after us with horrible grimaces and dripping fingers. This was too much for five-year-old courage, or even ten-year-old discretion, and screaming lustily we girls plunged headlong into the weeds and stones, pursued by our too ardent and colorful wooer.

As by magic, grandfather and the other grown-ups appeared, armed with stones and clubs and sticks, and the women with screams and flapping aprons gathered about us. Such a hubbub! How the women scolded and almost wept when we told our sobbing stories and they gazed at Caroline's and our ex-friend's purple visages. How the men shouted with laughter! Surely no Bluebeard of old ever created a greater commotion. What a frenzied scrubbing with cold spring water resulted, what a scouring with leaves and handkerchiefs and aprons; but the color to a great extent remained for days. "It set," as grandmother said.

But worse than that, much worse—love's young dream was shattered. I leave it to you. Who could love any person with so bluish a countenance, whose recent ardent declarations of affection had turned into hideous grimaces whenever our eyes met? But in my mind my first love became and will ever remain to the end "my blue boy."

What became of him, my first admirer and the leading figure of my first proposal? There in the East where "learning is learning," in one of those great universities, firmly fixed in one of those chairs of culture, peering behind dignified spectacles, delving into test tubes and formulas and writing long theses about things we common folk know nothing about, after his name all sorts of letters, a member of all sorts of scientific associations. I wonder if this learned professor ever remembers this early love affair and the treachery of his lady—this "Blue Boy of Mine"? I wonder if he ever dreams of forming a circus, or if he ever eats blueberry pie, or puts snakes—but dear, dear, what is the use?

One must not dwell too sadly upon the past; so, changing the subject, have you ever made red raspberry preserves with honey? If not, then you and your John and the little Johns and Jeans have a treat in store for you.

Try this:

**Red Raspberry Preserves**—To each pound of berries use one pound of honey. Mix well, spread on platters, put platters in a box slightly higher at back than front, cover with glass and place in sunshine. When preserves are thick, put into sterilized jars and seal. (By the way, John's solar wax extractor is fine for sun-dried preserves. Borrow it—if you can.)

**Apple and Raspberry Jelly**—Prepare apple juice in the usual way for making apple jelly. To one quart of apple juice use one pint of raspberry juice. Boil the combined juices twenty minutes, add equal amount of honey and boil until it sheets from the spoon. Pour into sterilized glasses and cool.

**Blackberry Jam**—Wash and mash berries. To each pound of berries add two-thirds pound of honey. Cook with frequent stirring until thick. Can in sterilized jars.

**Currant Jelly**—To each four cups of currant juice add three cups of very mild honey. Boil rapidly until it reaches the jelly test, pour into sterilized glasses, cool, and seal with hot paraffin.

**Strawberry Jelly**—Crush three pints of ripe strawberries. Squeeze juice, then drip through cotton flannel bag. Measure four cups honey with three cups of juice, stir and bring to boil. Add one-third bottle commercial pectin, stirring constantly. Bring again to full boil and boil for one-third minute. Remove from fire, let stand one minute, skim, pour quickly and cover hot jelly at once with hot melted paraffin.

## Is It Possible?

—to raise a good queen at 30c and make a profit?

**"No, of course not!"**

But if I get you on my list, I know I have you as a prospect for future business.

And I am sparing no expense to put out the best three-banded Italian queens my 26 years' experience as a beekeeper will permit.

If you don't like them when you receive them, mail them back and we will pay the postage.

Price, 30 cents

**A. E. Shaw -- A. P. Homan**  
Shannon, Miss.

## Choose Labels Wisely

You Can't Go Wrong with A-B-J Labels

They sell honey and are priced right.  
Send for complete catalog

**AMERICAN BEE JOURNAL**  
HAMILTON, ILL.

### E. E. Mott's Northern Bred Italian Queens

**Non-Swarming**  
Bendale Farm, N. Y., writes: "Have had your queens for years and needless to say am well satisfied with them. Can buy cheaper, but not sure of getting the qualities that make your strain superior. Guaranteed purely mated, \$1.00; six, \$5.50; twelve, \$11.00. Tested, \$2.00; virgins, 50c."

**E. E. Mott & Son, Glenwood, Mich.**

## Comb Honey Display Cases

We have a limited number of the smaller sizes of comb honey display cases which may interest smaller producers or display entrants. They are as follows, all for  $4\frac{1}{4} \times 1\frac{1}{2}$  sections:

	Lots of 10
12-lb. Display Cases	\$2.76
6-lb. Display Cases	1.21
24-lb. 2-Tier Display Cases crates of 25 (only 2 crates on hand) per crate	6.39

Send all orders to

**DADANT & SONS**  
Hamilton, Illinois



## Your Success Depends on Her Choice

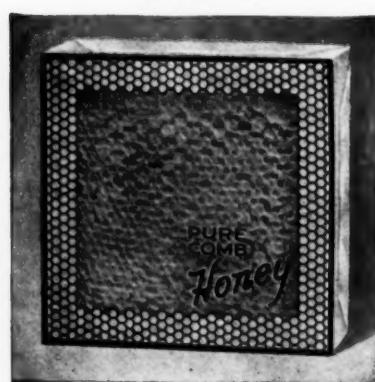


WILL she choose your product from all others in the field? Will she use it and like it, and buy it again? Will she be so thoroughly pleased that no competitive brand can even hope to win her away? It all depends on you. ~~if~~ Call it style, call it fashion or fad, or call it whatever you will—the fact is plain that never has the APPEARANCE of merchandise been so important as it is today. The force that made Henry Ford give style to his line of cars—the force that made manufacturers of kitchen equipment color their pots and pans—the force in its countless different expressions is the handwriting on the wall for us all.

Groceries, drug products, paints and tobacco—the whole list of a continent's products must bow to the modern trend. To the humblest merchandise, style is vital, if that product is to win anything like its potential sales.

Take a new look at your comb honey wrapper or container for extracted honey—is it modern, is it attractive, does it catch and hold the eye? Is it brightly designed as only experts can do? Will it come up to snuff in competition on the dealer's crowded shelf? Will it, in short, actually help to sell your honey?

Because a style is so vital now, because it will become more and increasingly more important, it behooves every honey producer to use honey packaging products that will retain these objectives.



The Wrapper You Will Eventually Use

### Price of Wrappers All Cellophane Bag Wrappers

	Per 100	Per 500	Per 1000
For 4 1/4 x 1 7/8	\$ 1.25	\$ 5.60	\$ 10.95
For 4 x 5 plain section	1.25	5.60	10.95

### Combination Cellophane Bag Wrappers

For 4 x 5 plain section	1.00	4.60	9.00
For 4 1/4 x 1 1/2 plain section	.95	4.40	8.50
For 4 1/4 x 1 5/8 beeway or plain	.95	4.40	8.50

(Last size listed especially for Canadian Beekeepers)

Transportation charges prepaid to any address. Send for free samples; state size of section used.  
Write for prices on large quantities.

Send for Complete Catalog of Honey Packaging Equipment and Supplies (for both comb honey and extracted honey)

C. W. Aeppler Company

The Honey Packaging Authorities

Oconomowoc, Wisconsin

## Crop and Market Report

Compiled by M. G. Dadant

For our July crop and market report, we asked reporters to answer the following questions:

1. How is the crop so far?
2. Prospects for the season?
3. Any honey on hand?
4. How are prices ranging?

### Crop so Far

Of course, in most sections of the country it is yet too early to have any crop except preliminary stimulative flows. However, we have pretty complete reports from the southern half of the country. The heaviest flows have been in Maryland, Virginia and West Virginia, with probably an average flow in the Carolinas. Georgia, which started out so heavily early, finished up with probably 80 per cent of average production, and Florida is far below, probably only 50 per cent. The honeyflow in Alabama has been normal. In Mississippi the early flows were a disappointment, but the later ones are above normal. Louisiana has had probably a normal flow and Texas almost, if not nearly so.

The biggest disappointment undoubtedly has been in California, where the orange flow has only been about 50 per cent of normal and the sage harvested so far also a disappointment. Arizona and New Mexico neither one are reporting up to the normal flow, some reports only indicating about 50 per cent of the usual amount.

### Prospects

Maryland and the Virginias again are anticipating good flows, whereas the Carolinas, Georgia and Florida indicate that if they get 75 per cent of ordinary they will do very well. Alabama, Mississippi and Louisiana are expecting about normal amount, with perhaps a little more than this in Mississippi. Dry weather is affecting the prospects in Alabama somewhat. In Texas prospects are just a little below normal, and in New Mexico and Arizona considerably below. California seems to be hit all around. Outside of the Imperial Valley, the prospects are below normal. In the Imperial Valley, however, prospects seem to be considerably above last year and above normal.

In the north half of the country we cannot report anything phenomenal either. The New England States and New Jersey seem to be favorably located, with probably a normal crop in prospect. Western New York is particularly favored and beekeepers there, although they have gathered nothing yet, have their bees in excellent condition and wonderful prospects for clover. The western sections of the state do not seem to be so well favored, but will have somewhat less than a normal crop. Ohio and Indiana have improved their prospects considerably, but still do not expect any normal crop, on account of the effect of the dry weather on clovers last year. Southern Michigan is similarly affected, as is southern Wisconsin. The northern peninsula of Michigan and northern Wisconsin apparently are going to have a normal flow. Minnesota expects normal, but nothing above, in the sweet clover sections; but the southern part of the state, as well as Illinois and eastern Iowa, do not expect anywhere near normal; 40 per cent would probably be closer to it.

The northern plains states are not optimistic on the honeyflow this year. While bees are in good condition, they are not above the usual strength, and probably below, owing to the very cool weather during the early stimulative flows. Besides, the weather has been too dry for best plant conditions, and if the drought should continue, it will curtail very much the yield from the clover plants. The only state which appears to be particularly favored is Nebraska, where conditions are the equal of last year, and this was above normal. Kansas reports about normal conditions or a little below, and South Dakota also somewhat below normal.

Nor does the condition improve as we reach the intermountain territories. All of the intermountain states are suffering for want of rain, although lately rains have been falling to some extent. There is, however, a deficiency

of moisture yet. Colorado and Montana particularly are complaining of the prospect ahead, and Wyoming reports only about 75 per cent of usual, with Idaho about the same. Utah is probably the best favored, but they have had terrific winter losses of bees there which will hardly be made up before the flows arrive. Nevada does not expect normal conditions.

On the Pacific slope, California and Washington appear to be about normal in prospects, whereas southern California will do well to equal last year's and cannot approach normal conditions, we believe.

Prospects are normal in the eastern Canadian provinces, but in the west there has been a deficiency of rainfall, and unless rains come during the next three or four weeks, there is going to be a shortage.

### Honey on Hand

Strange as it may seem, there has been a wonderful change from our report cards of last month in the volume of honey left on hand. Nearly everyone reports either no honey on hand or very much decreased supply, with nothing carried over for the competition with the new crop. Exceptions to this are Florida, which reports 50 per cent of the 1930 crop on hand; Kentucky, about 15 per cent; Louisiana, 20 per cent; Texas, 10 per cent. In the intermountain territory, even where the heavy amounts were being carried, there has been a great diminution in amount. Colorado still reports about 25 per cent of the old crop on hand. Nevada, Wyoming and Washington each report several cars still on hand. In Montana and Idaho the crop seems to be fairly well cleaned up.

In Ontario there seems to be quite a lot of honey left, but the western provinces seem to have disposed of practically everything. At least it is all out of the hands of producers and into the hands of the retail agencies.

We cannot say that there is no honey left, but the amount has diminished very rapidly in the past six weeks and the demand has been strong, but, of course, at reduced prices. We believe conditions are getting generally than they have been for a good many years as to amount of honey left, especially highest grade.

### Price Range

In practically all instances where honey has had to meet the central markets, the price range has been gradually downward. There are quite a large number of reporters, however, who state that they have been getting the same price during the past season as usual and that they expect to maintain this price during 1931-32.

Many others, however, are dropping the price, but state that honey in relation to other products still is a good proposition.

The beekeeper who has continued with his local retail channels undoubtedly is far more fortunate than the one who has to seek larger markets and sell in a lump. In fact, as the Government reporter states, we are approaching now the old conditions which we had previous to war time, when much of our honey was disposed of through retail or direct channels.

### Summary

All in all, we are rather encouraged over the amount of honey disposed of previous to the 1931 season. It looks like there will be very few sections in which a normal crop will be harvested this year. This will have a tendency, however, to stiffen the price, if such a thing is possible, or at least it will reduce the supply. Just now most of our honey is reaching domestic channels, very little going for export, and it certainly is a satisfaction to see that the domestic markets are rapidly absorbing our surplus. No doubt a large part of this is due to the fact that beekeepers have themselves become active in distributing honey locally. The honey marketing agencies, both cooperative and individual, have no doubt had a big part in this, as has also the American Honey Institute and other organizations.

We Are Cash Buyers of Honey and Beeswax  
Submit samples, and best prices, freight prepaid  
Cincinnati. We also furnish cans and cases.  
Fred W. Muth Co. Pearl and Walnut  
Cincinnati, Ohio

Renew Your Subscription  
Write for Our Special Club Offers  
AMERICAN BEE JOURNAL

Edwin H. Guertin 236 N. Clark St.  
Chicago  
Buy and Sell All Grades Extracted Honey  
References: 1st National Bank, R. G. Dua or  
Bradstreet's Commercial Reports.

# The BEEKEEPER'S EXCHANGE

Copy for this department must reach us not later than the fifteenth of each month preceding date of issue. If intended for classified department, it should be so stated when advertisement is sent.

Rates of advertising in this classified department are seven cents per word, including name and address. Minimum ad, ten words.

As a measure of precaution to our readers, we require references of all new advertisers. To save time, please send the name of your bank and other references with your copy.

Advertisers offering used equipment or bees on combs must guarantee them free from disease, or state exact condition, or furnish certificate of inspection from authorized inspector. Conditions should be stated to insure that buyer is fully informed.

## BEES AND QUEENS

**CHOICE**, bright Italian queens that are a pleasure to work with and you will be proud to own. Requeen with stock that has been bred and selected in the North the past twenty-eight years for good wintering; hustlers, gentle, and fine color. One queen, \$1.00; two or more, 90c each; \$9.00 per dozen. Breeders, \$10.00. Emil W. Gutekunst, Colden, N. Y.

**FOR SALE**—Golden Italian queens, noted for their gentleness and honey gathering. None better. My prices the rest of the season, 50c each, any amount. Satisfaction guaranteed in U. S. and Canada. E. A. Simmons Apriaries, Greenville, Ala.

**SELECTED** untested queens, 40c each; \$4.50 per dozen. N. B. Smith & Co., Calhoun, Alabama.

**CAUCASIAN QUEENS**—After June 1: One, 65c; ten, \$6.00; twenty-five or more, 50c each. Safe arrival and satisfaction. Tillery Bros., R. 6, Greenville, Ala.

**BRIGHT** three-banded or golden Italian queens, the very best, balance of season, 50 cents each; 50 to 100 lots, 45c. Taylor Apriaries, Luverne, Ala.

**REACROFT**—Select Italian queens: One, 75c; five, \$3.50; ten, \$6.50. Satisfaction guaranteed. Geo. H. Rea, Reynoldsville, Pa.

**PURE ITALIAN BEES**—Two-pound package with queen, \$2.50. Select untested queen, \$1.00; select tested queen, \$1.25. J. Allen, Catherine, Ala.

**SUMMER** and fall low price on the very best Carniolan and golden queens. Tested, 75c; untested, 50c. Bees, 75c per pound. C. B. Bankston, Buffalo, Texas.

**TRY** Ruschill's bright honey-go-getting lobred Italians; they are the favorite with many beekeepers from coast to coast. Selected untested queens, 60c each. Charles L. Ruschill, Colfax, Iowa.

**DAY'S** golden queens, balance of season, any number, 50c each. To meet competition, the price had to be cut, but they are still the big, bright, hustling kind—one that will please you to look at and add profits to your income. They are shipped with a guarantee to be second to none. E. F. Day, Honoraville, Ala.

**DIEMER'S** bright Italian queens, 75c each, mailed to you in my double-barrel introducing cage. J. F. Diemer, Liberty, Mo.

**SHE-SUITS-ME QUEENS**—See ad on page 340. Allen Latham, Norwichtown, Conn.

**JES DALTON** thanks his friends for their liberal past business. Is having fine combs drawn in his supers on the latest make of Dadant's new wired foundation with the hook fasteners for those fine comb packages next season. "Himself," Kenner, La.

**GOLDEN** Show-Bird queens. Special, select tested; no untested for sale. Price, \$2.50 each. Fancy price for fancy stock. Sent by parcel post. J. F. Diemer, Liberty, Mo.

**CAUCASIAN QUEENS**, producing pretty grey bees that are record honey getters. Very gentle, long lived, heavy layers, and longest tongue. By first class mail: Untested, six, \$1.25 each; twelve, \$1.15 each. Bird's Apriaries, Odebolt, Iowa.

**YELLOW** Italian queens. Bred to meet the many requirements of honey producers. Repeat orders prove they are doing this. Over 13 years a breeder. New low prices are: One untested, 90c; six, \$4.80; twelve, \$7.20; twenty-five, 55c each; over twenty-five, 45c each. Tested, \$1.25; select tested, \$2.00. Circular on request. Health certificate. Safe arrival and satisfaction. Hazel V. Bonkemeyer, R. 2, Randleman, N. C.

## FOR SALE

**FOR SALE**—Cheap: Used honey cans, two to case, in good condition. Limited quantity. E. Rau & Co., 110 N. Franklin Street, Chicago, Ill.

**BARGAIN**—Reversible two-frame extractor, fine condition, \$17.00. Elkhurst Apriary, Zippel, Minn.

**ROOT** four-frame extractor, used one year, as good as new. Also Root uncapping machine complete with motor, fine shape. These are priced to move. Harry C. Kirk, Armstrong, Iowa.

**26 MODIFIED DADANT** hives, 46 extracting supers, used one year, \$100.00. Walter Kimes, R. 3 Belleville, Ill.

## HONEY FOR SALE

**HONEY FOR SALE**—Any kind, any quantity. The John G. Paton Company, 230 Park Avenue, New York.

**FOR SALE**—White clover honey in 60-pound cans. None finer. Satisfaction guaranteed. J. F. Moore, Tiffin, Ohio.

**HONEY FOR SALE**—All grades, and quantity. H. & S. Honey and Wax Company, Inc., 265 Greenwich St., New York City.

**FOR SALE**—Extra choice white clover honey, case or carload; also amber. David Running, Fillion, Mich.

**FOR SALE**—Our own crop white clover and amber fall honey in barrels and cans. State quantity wanted and we will quote prices. Samples on request. Dadant & Sons, Hamilton, Illinois.

**FOR SALE**—Northern white, extracted and comb honey. M. W. Cousineau, Moorhead, Minn.

**NEW CROP** shallow frame comb honey, also section honey; nice white stock, securely packed, available for shipment now. Colorado Honey Prod. Ass'n, Denver, Colo.

**WHITE** Clover extracted honey. Write for prices and samples. Kalona Honey Co., Kalona, Iowa.

**CLOVER** honey, choice, ripened on bees. Satisfaction guaranteed. Case or quantity. E. J. Stahlman, Grover Hill, Ohio.

**HONEY FOR SALE**—White and amber honey in 60-lb., 10-lb. and 5-lb. tins. Write for prices. Dadant & Sons, Hamilton, Illinois.

**HONEY**—We sell the best. Comb in carriers of eight cases each; extracted, basswood, buckwheat, sweet clover, white clover and light amber. Tell us what you can use for prices. A. I. Root Company of Chicago, 224-230 West Huron St., Chicago, Ill.

**LOWER** prices on comb and extracted honey. Write H. G. Quirin, Bellevue, Ohio.

**YOU** can save and make money buying our honey, maple syrup and pure food products at wholesale prices for your own use and reselling to your neighbors and trade. Lowest prices 25 years. \$50,000 sales last year and expect to double this year. It will pay you in hard dollars and cents to line up with the Griswold Honey Company, Madison, Ohio, U. S. A.

**FOR SALE**—Sweet clover extracted honey; quality and body fine. Thomas Atkinson, Route 6, Omaha, Neb.

**FOR SALE**—100% pure maple syrup, 100% pure country sorghum, comb and extracted honey. C. J. Morrison, South Bend, Indiana, 1235 Lincoln Way West.

**FOR SALE**—Clover honey in new 60-pound cans at 7c pound. Edw. Hogan, Canadagua, N. Y.

1930 CROP white honey in new cans; case or ton lots. Satisfaction guaranteed. Ask for prices and free sample. Harry C. Kirk, Armstrong, Iowa.

**ORANGE**, palmetto or amber honey in barrels. Peter W. Sowinski, Fort Pierce, Fla.

**FOR SALE**—Clover extracted honey, new crop, \$9.00 per case 120 pounds. Cash with order. Virgil Weaver, Moville, Iowa.

KEEP your trade supplied with our extra quality clover-basswood honey at these low prices: 7c case lots, 6 1/2c ten case lots. Amber, 5c. A. J. Wilson, Hammond, N. Y.

## HONEY AND BEESWAX WANTED

**WANTED**—Shipments of old comb and cappings for rendering. We pay the highest cash and trade prices, charging but 5 cents a pound for wax rendering. Fred W. Muth Company, 204 Walnut St., Cincinnati, Ohio.

**WANTED**—A car or less quantity of white honey in 60-lb. cans. Mail sample and quote lowest cash price for same. J. S. Bulkeley, 816 Hazel St., Birmingham, Mich.

**WANTED**—Car lots of honey. State quantity, shipping point and price. Mail sample. Hamilton, Wallace & Bryant, Los Angeles, Calif.

**WANTED**—Western states water-white and white honey in car lots. Send type samples. Advise quantity, price and point of shipment. E. F. Lane & Son, 325 Davis St., San Francisco, Calif.

## WANTED

**WANTED**—By active young man 20 years of age, work at garage or with a carpenter, or farming. Good references furnished. Write G. V. Larkey, Fairbault, Minn., Gen'l Del.

**WANTED**—Job with beekeeper for summer season. Have had experience. Hubert Martin, 1120 Forest Ave., W. Covington, Ky.

**WANTED**—Position with big beekeeper as manager for 1932, or lease with same. Best references. Prefer mountain states location. Address Manager, care American Bee Journal.

## SUPPLIES

### THE DADANT SYSTEM IN ITALIAN

The "Dadant System of Beekeeping" is now published in Italian, "Il Sistema d'Apicoltura Dadant." Send orders to the American Bee Journal. Price \$1.00.

**BEST QUALITY** bee supplies, attractive prices, prompt shipment. Illustrated catalog on request. We take beeswax in trade for bee supplies. The Colorado Honey Producers' Association, Denver, Colo.

**FOR SALE**—We are constantly accumulating bee supplies, slightly shopworn; odd sized, surpluses, etc., which we desire to dispose of and on which we can quote you bargain prices. Write for complete list of our bargain material. We can save you money on items you may desire from it. Dadant & Sons, Hamilton, Illinois.

**COMB FOUNDATION**—Note these low prices on 20-lb. lots: Medium brood, 5c; thin section, 60 cents. Can furnish the new non-sagging foundation. Wax worked at lowest rates. E. S. Robinson, Mayville, N. Y.

MAKE queen introduction sure. One Safin cage by mail, 25¢; five for \$1.00. Allen Latham, Norwichtown, Conn.

FOR SALE—Queen mailing cages. Material, workmanship and service all guaranteed. Write for quantity prices. Hamilton Bee Supply Co., Almont, Mich.

REDUCED PRICES—Medium brood foundation, 44¢ pound, any quantity; light brood, 47¢; thin super, 52¢. Freight prepaid anywhere in U. S. A. in quantity 100 pounds. Superior Honey Co., 814 East Sixty-first St., Los Angeles, Calif.

#### MISCELLANEOUS

THE BEE WORLD—The leading bee journal in Great Britain and the only international bee review in existence. Specializes in the world's news in both science and practice of apiculture. Specimen copy, post free, 12 cents stamps. Membership of the Club, including subscription to the paper, \$2.55 (10/6). The Apis Club, Brockhill, London Road, Camberley, Surrey, England.

PLANS FOR POULTRY HOUSES—150 illustrations. Secret of getting winter eggs. You need this book. Write for free offer and sample copy of Inland Poultry Journal, 51 Cord Bldg., Indianapolis, Ind.

MARBLEBOARD BINDER—For back copies of the American Bee Journal. Will hold two years. Keeps your magazines in shape for ready reference. Price only 75¢, postpaid. American Bee Journal, Hamilton, Ill.

HAVE YOU any Bee Journals or bee books published previous to 1900 you wish to dispose of? If so, send us a list. American Bee Journal, Hamilton, Ill.

VITEX, "Negundo Incisa." The only nectar producing vitex listed by the Bureau of Foreign Plant Introduction. 24- to 36-inch trees, 50¢, prepaid. Joe Stallsmith, Galena, Kansas.

HONEY LABELS and printing. Catalog and samples free. Correspondence solicited. Traders Printing Company, Springfield, Mo.

#### Ohio Association Host at Medina Meeting August 5, 6, 7

Just before going to press, and too late for inclusion in the regular columns of "Meetings and Events," we learn that the Ohio State Beekeepers' Association will hold an evening meeting August 5, at Medina, Ohio. The meeting will continue for the following day, August 6, with a well planned program and an evening banquet. On the seventh a tour of bee yards is planned, the three days thus being well proportioned to pleasure and profit. A cordial invitation is extended, through Secretary W. E. Dunham, to beekeepers of neighboring states to attend the meetings.

#### The Greatest Need of the Hour

The greatest need of the hour is properly supervised research to determine the facts about honey. Beekeepers have long talked about honey, but who knows the real truth about it? The facts should be ascertained. J. H. Sturdevant, Nebraska.

#### SUPPLIES

Dadant's Modified Hives, Frames, Wired Foundation, Extractors, Pails, Jars, Labels  
Dadant & Sons Hamilton, Ill.

#### Why Not Build Value Out of Different Honey Flavors?

Let me say a few words about grading honey. Our standards of grading by color seem wrong to me. My customers demand flavor and have always demanded it. Our honey is not a pure white honey; it is a blend of many flowers. With us the dandelion adds a fine flavor when blended with white clover, basswood with goldenrod, and other autumn flowers.

Ours is a natural blend. Sometimes there is less of one and more of another honey, but it makes no difference. My customers like it and we always get a fair price for it. We prefer it to pure white clover.

Why not educate the people to the different flavors of honey that we have? Some may like one better than another, and then when one is tired of a certain flavor another will take its place readily. Apples are not all of one kind that we buy on the market. Each variety holds its own customers. The tastes are not the same. We must not forget that.

Our least important problem, I think, is the "standardization" of honey. It is an impossibility and at the same time an unnecessary thing to undertake. I like a change in flavors of honey and I am pretty certain that I am not the only consumer of honey who likes a change in flavor.

People look for change and expect it in everything. We have new styles in dress, new models in cars, new designs in homes. Why not spread the truth about honey? Why not inform the public that there are many different honey-producing blossoms and as many different flavors of honey?

Let's step to the steering wheel, spread the truth about honey, and give every producer a fair play.

Mathias R. Vikla, Minnesota.

#### Navy Department Allows Commissary Stores Purchase Honey

A letter received by the American Honey Institute from the United States Navy Department, inquiring about the policy of that department in purchases of honey, advises that, although the Navy ration does not include honey among the articles authorized for issue to enlisted men, the Navy nevertheless authorizes commissary stores to purchase articles of this kind on the demands of the patrons for resale purposes, the trade being solicited in the same manner as in commercial life. Beekeepers who may be interested in supplying such stores with honey should call upon the officers in charge with samples.

The following is a list of commissary stores:

U. S. Navy Yard, Portsmouth, N. H.

U. S. Navy Yard, Boston, Mass.

U. S. Navy Yard, New York, N. Y.

U. S. Naval Training Station, Newport, R. I.

U. S. Navy Yard, Philadelphia, Pa.

U. S. Naval Operating Base, Hampton Roads, Va.

U. S. Navy Yard, Norfolk, Va.

U. S. Navy Yard, Charleston, S. C.

U. S. Naval Training Station, Great Lakes, Ill.

U. S. Naval Station, Key West, Fla.

U. S. Naval Air Station, Pensacola, Fla.

U. S. Navy Yard, Mare Island, Cal.

U. S. Naval Base, San Diego, Cal.

U. S. Navy Yard, Puget Sound, Wash.

U. S. Naval Station, Tutuila, Samoa.

U. S. Naval Station, Gavite, P. I.

U. S. Naval Station, Guam, M. I.

U. S. Naval Station, Olongapo, B. I.

U. S. Naval Air Station, Coco Solo, C. Z.

U. S. Navy Yard, Pearl Harbor, T. H.

U. S. Navy Academy, Annapolis, Md.

U. S. Naval Air Station, Lakehurst, N. J.

U. S. Submarine Base, New London, Conn.

U. S. Naval Station, Guatamano Bay, Cuba.

U. S. Receiving Ship, San Francisco, Cal.

Communicate with the "Officer in Charge" of the store concerned. Example: Officer in Charge, Commissary Store, U. S. Navy Yard, Portsmouth, N. H.

The American Honey Institute has sent a complete set of Honey Helpings to each one of those in charge of the stores, and it is hoped that beekeepers in these localities can follow this up and sell honey.

Malitta D. Fischer,  
Honey Specialist,  
American Honey Institute.

#### He Whose Bees "Never Swarm"

The fellow whose bees "never swarm" is the one who gets around before they swarm, or else they swarm before he gets around—mostly the latter. With a strong colony and a clipped queen, a virgin often leads forth a swarm, and the beekeeper, finding the clipped queen doing business at the old stand, is ready to declare that his bees "never swarmed." He just doesn't know, that's all.

E. S. Miller, Indiana.

## Personally Reared Italian Queens

Safe arrival and entire satisfaction guaranteed. 45 CENTS EACH. LARGE QUANTITIES, write. Give us a trial. We will treat you right.

ROY S. WEAVER & BRO. . . NAVASOTA, TEXAS

# “Reif-Rapped” Honey

### Brings Plus Profits

MODERN SANITARY HONEY PACKING

“Reif-Rapped” Eliminates the Unsightly Dust-Catching, Sticky Section That Dealers Detest.

Complete Equipment for Wrapping and Shipping.  
Cases Holding 24 12- to 16-oz. Cakes Only \$45.00 per 100.

YOUR TERRITORY MAY STILL BE OPEN

Write E. H. REIF, KALONA, IOWA

Patented in U. S. A.—Pending in Canada

## They Work With a Will

These Hardy Caucasians, but So Gentle  
—You Will Love Them

Our strain comes direct from the heart of the Caucasus region. You will never know how they do for you—until you try them.

Every daughter we have from these breeders, was raised this year—nice, young vigorous queens. Ready now:

**One Queen, \$1.00 : One Dozen, \$10.00**

**The Caucasian Apiaries, Lenox, Ala.**

**“Better Bred”  
Italian Queens 40c each  
any number**

These queens are as good as money can buy, absolutely guaranteed in every respect. Healthy, gentle, and honey getters. No disease ever known here. Health certificate with each order. Send \$1.90 for trial order of five queens.

2-lb. Package bees with selected queen \$2.00  
3-lb. Package bees with selected queen 2.50

Reference: Citronelle State Bank, Citronelle, Alabama

**CALVERT APIARIES, Incorporated, CALVERT, ALABAMA**

R. G. Holder

**Mention The American Bee Journal When Writing Advertisers**

## QUEENS

Better than ever

Through balance of the season, will furnish SELECT, guaranteed pure three-banded Italian queens at 40c each, or 35c in lots of ten or more. Guaranteed in every way. Compare with others.

The Crowville Apiaries  
Winnsboro - Louisiana

Select Young  
Three-Banded Italian  
Laying Queens

**50c each Postpaid**

Reared from the finest, gentlest and most productive stock we can select from our one thousand colonies. They will not disappoint you. Why have any weak colonies or inferior stock when you can have the best at such a low price?

Prompt shipments. Safe arrival guaranteed.



Combless Packages  
for Immediate Shipment

With queen	2 lbs.	3 lbs.
1 to 5, each	\$2.50	\$3.25
6 to 15, each	2.25	3.00
16 to 50, each	2.00	2.75

For larger packages add 75c a pound. Queenless packages 50c each less.

Express or mail shipment

**W. D. ACHORD**

Fitzpatrick, Alabama  
Extensive shippers for 19 years

**Northeast Texas Queens**

We Specialize in Three-banded Italians

**40c QUEENS 40c**

We guarantee these queens to be 99 per cent purely mated and to equal the best of the higher priced on the market. We guarantee safe arrival in good condition. Health certificate with each shipment. Our tremendous production enables you to buy queens with breeding that would otherwise cost a great deal more than the price asked.

**O. D. Rivers, Powderly, Texas**

## Mack's Queens (3 Band) 50c each

Guaranteed to equal any you can buy,  
regardless of price

**Herman McConnell**  
(The Bee and Honey Man)  
ROBINSON, ILLINOIS, ROUTE 2

## Golden Bees and Queens

Beautiful, gentle and excellent honey  
gatherers. Delivered prices parcel  
post or prepaid express.  
2-lb. package, including young  
laying queen \$3.25  
3-lb. package, including young  
laying queen 4.25

### Queens

Select—One, 50c; ten to twenty-  
four, 45c each; twenty-five and more,  
40c each.

We have a special made (patent  
pending), safe introducing cage in  
which safe introduction is guaranteed,  
even to a laying worker colony. The  
price is 50c extra per queen when  
sent in these cages.

No disease. Send us your rush orders.

**The Golden Apiaries**  
LETOHATCHIE, ALABAMA  
John T. Knight, Mgr.

## Morrison's Northern Italian Queens

Untested 60c each  
Tested \$1.00 each  
Satisfaction guaranteed

**Geo. Morrison, Cloverdale, O.**

## RED STICK Packages and Nuclei

We guarantee: Purely mated select  
young queens—Liberal overweight—  
New light shipping cages—Delivery  
in good condition—No disease—Young  
pure Italian bees—No drones—Prompt  
shipment—First-class combs with nu-  
clei—State health certificate—And,  
above all, satisfaction to the last de-  
gree.

1-24	25 up	
2-lb. Package	\$2.25	\$2.00
3-lb. Package	3.00	2.75
4-lb. Package	3.75	3.50
5-lb. Package	4.25	4.00
2-fr. Nuclei	2.50	2.25
3-fr. Nuclei	3.25	3.00
4-fr. Nuclei	4.00	3.75
Orchard Package	4.50	4.25

Queens included in above prices

Pure Italian Queens—1 to 4	50c	
5 to 9	45c	
10 or more	40c	

Deduct 75c from above prices if  
packages or nuclei are wanted queen-  
less. Parcel post shipment if desired.

We guarantee our packages and  
nuclei to be A No. 1 and first class  
in every respect, and assure you that  
you cannot go wrong if you place  
your order with us. Write for our  
circular and wire us your rush orders.

**RED STICK APIARIES**  
Baton Rouge, Louisiana

## NEW LOW PRICES ON BERRY'S RELIABLE QUEENS

### Thousands of Colonies --- Thousands of Nuclei for the Breeding of Pure Three-Banded Italian Queens

Our strain is carefully tested in our own honey producing yards in Wisconsin, Nebraska, Iowa and  
Western Canada. We know what we send you. No guesswork.

Warranted purely mated Three-Banded Italians—No Disease—All shipments certified.

Young 1931 Three-Banded Italians—Select Stock—Prompt Shipment

50c each; 12-50, 45c each; 50-100, 40c each

Especially attractive prices on large lots. Write us.

**M. C. BERRY & CO., Box 697, Montgomery, Ala.**

## MOUNTAIN GRAY CAUCASIAN QUEENS

To rear any given race of bees successfully means that you must have plenty of bees  
of that race and plenty of experience. We have both. Never was the quality of our 1931  
queens as high and never was our price as low. If you have never tried Caucasians, send  
us a trial order. Every queen guaranteed to please.

Queens—Untested, in lots of 25 and over, 81c each; 13 to 24, 90c each; 12, \$12.00;  
1 to 5, each, \$1.25. Tested queens, each, \$2.50. Select tested, each, \$4.00.  
Health certificate with each shipment.

**Bolling Bee Company, Bolling, Alabama**

Telegraph and shipping point, Bolling, Alabama



Root



Queens

The origin of Root queens dates back to 1865, when the late A. I. Root captured  
his first swarm of bees, then purchased his first \$20.00 Italian queenbee from L. L.  
Langstroth. Since then we have spared no pains in developing a strain of Italian  
queens which today has no superior.

We begin furnishing Medina-bred queens from our Basswood Apiary about June  
15. Prior to that date we furnish the best queens obtainable from southern breeders.

We receive many unsolicited testimonials regarding the merits of Root Queens.  
Lack of space permits only one, from the many who write, as follows:

### "Must Have Some More"

"From one colony with a Root queen I extracted 470 pounds of honey. This  
is very good. This I know to be true in every detail. I have nearly all Root's bee  
goods, including smoker, extractor and uncapping knives, and they are the best;  
including the beautiful bees you have from Medina. But I must have some more  
of those queens, as an apiary would not be complete without some Root queens  
in it. That is the reason why I am sending to you, because I cannot get as good  
elsewhere."—John Watson, Mangoplah, N. S. W., Australia, April 23, 1930.

### QUEEN PRICES FOR U. S. A. AND CANADA

Untested	Tested	Select Tested	Quantity:	June 1 to October 15	
			1 to 9	10 to 24	25 or over
			\$1.00 ea.	\$0.90 ea.	\$0.75 ea.
			2.00 ea.	1.90 ea.	1.75 ea.
			5.00 ea.		

Customers outside U. S. A. and Canada must add 25 cents per queen to above  
prices to cover extra postage and cost of larger cages.

Note: Our UNTESTED QUEENS are young, laying queens reared this season,  
that are practically all purely mated and sold when mated.

Our TESTED QUEENS are older queens guaranteed purely mated.

Our SELECT TESTED QUEENS are choice tested queens that might be used as  
breeding queens, although they are not tested for breeding purposes.

**OUR GUARANTEE ON QUEENS**—We guarantee safe arrival of queens sent in  
mailing cages to customers in the United States and Canada, but not to island pos-  
sessions or other foreign countries. We agree to refund the money or replace the  
queen if the one first sent arrives dead, provided the beekeeper receiving the dead  
or unfit queen notifies us and returns her at once and in her own shipping cage,  
properly marked with name and address of sender. No delay in returning the queen  
can be permitted. Guarantee does not cover queens shipped out of U. S. A. and  
Canada.

### BEES IN COMBLES PACKAGES SHIPPED BY EXPRESS FROM MEDINA

Our special 2 1/2-lb. package of bees, with young laying Italian queen,  
for only \$3.10

You will like this package

**The A. I. Root Co., Medina, Ohio**

## Could Our Honey Be Like Fish in England?

COMMENTING on the British fishing industry, B. C. Forbes, editor of Forbes Magazine, New York, is quoted in the Chicago Herald and Examiner as follows:

"Every business man wants to know, 'How can I increase my business at a profit?' The British fishing industry declined several years ago as badly as numbers of American industries have lately declined. Today it is flourishing. This transformation did not just happen. Brains were the cause of it.

"How? The whole fishing trade agreed to levy a penny on the pound sterling (2c on \$5.00) on the value of all the fish landed, the proceeds to be spent in advertising. Last year this totaled \$700,000. The whole of it has been spent in the 'More fish campaign' with which the world is now familiar. The results have been simply amazing. The income of the British trawler owners has been increased by no less a sum than \$5,500,000 and the sale of fish has gone up 57,000 tons in one year.

"What has been happening in the United States? Have industries utilized to the full this effective weapon, advertising? Broadly speaking, with certain notable examples, they have not. Are we backbonelessly to take a licking lying down?"



ALTHOUGH Mr. Forbes talks of conditions in general and gives this wonderful example, is he not talking to beekeepers? Are we to take a licking lying down, with the most wonderful product of nature in our hands? A gifted product, full of facts, full of beauty, full of value? Are we to let this go unheralded?

AMERICAN HONEY INSTITUTE is doing the job of putting honey before the American people through the most effective sources to receive information—home economic leaders, utility women, radio, household and chat directors. The Institute works in each state in a way that local advertising cannot do.

The American Honey Institute will put your honey on the map. The harder the times and the lower the price of honey, the more important this kind of work is. We pay 12 cents for a package of cereal containing three-fourths of a cent of food because it has been advertised, but we sell 10 cents worth of our honey for 4 cents. Why the difference? Let's get behind our interests. American Honey Institute is your organization. Only a few beekeepers are supporting it the way they should. You can make it or you can break it. It exists for you as a beekeeper, and only for you.

AMERICAN HONEY INSTITUTE  
225 WIMMER BUILDING  
INDIANAPOLIS, INDIANA

*This space donated to the American Honey Institute by Dadant & Sons, Hamilton, Ill.*

**FOR SALE**  
**ITALIAN QUEENS**  
**AS GOOD AS CAN BE RAISED**  
**35c Each**  
**GRAYDON BROS., R. 4, Greenville, Ala.**

### MILLER'S STRAIN Italian Queen Bees for Sale

From my best select breeders. Gentle; honey getters; hardy; winter well; not inclined to swarm; three-banded. Thirty-seven years' breeding experience. Satisfaction and safe arrival guaranteed, but safe introduction.

Queens by return mail: One select untested, \$1.00; twelve for \$11.00. One untested, 75c; six for \$4.00; twelve for \$7.00. Tested queens, \$2.00 each.

**I. F. MILLER**  
183 Valley Brookville, Pa.

### ATCHLEY BEE GLOVE

All pure white heavy duck, 22 inches long. Washable while on hands. Absolutely sting proof. Postpaid:

**75c PER PAIR**  
Discount to dealers  
**WM. ATCHLEY**  
144 Campus Ave., Upland, California



**BEES**  
**PILE UP EXTRA SUPERS**  
**OF**  
**HONEY**

That's why they are guaranteed to please.

We can make quick delivery on large or small orders and our prices on young laying THRIFTY untested queens are:

**45c each**  
**40c each in lots of 50 up**

Only the best queens shipped. Write or wire your order today.

Ask for free booklet.  
**W. J. FOREHAND & SONS**  
FORT DEPOSIT, ALA.  
SINCE 1892

### Stevensons' Goldens

Those large, uniform, dependable, prolific queens. The kind you need for good results. Their progeny are excellent honey producers, good to look at, and are surprisingly gentle.

Single queens, \$1.00; two to nine, 80c; ten to twenty-four, 70c; twenty-five and over, 60c. No reduction in quality.

**STEVENSONS' APIARIES, WESTWEGO, LA.**

# Special Prices

5 10-fr. shallow ext. supers, empty, 15 1/2"	\$1.75
5 10-fr. shallow ext. supers with frms, 15 1/2"	2.50
5 10-fr. metal roofs with inner covers	4.00
5 10-fr. standard bodies, empty	3.00
5 10-fr. standard bodies, with frames	5.00
100 Hoffman frames, split or one-piece bottom bars	3.75
5 10-fr. reversible bottom boards	2.00

## Sections

500 4 1/4 x 4 1/4 x 1 1/2" plain No. 2	\$2.50
500 4 1/4 x 4 1/4 x 1 1/2" plain No. 1	4.75
500 4 x 5 x 1 3/8" plain No. 2	2.50
500 4 x 5 x 1 3/8" plain No. 1	4.00
500 4 1/4 x 4 1/4 x 1 1/2" Beeway No. 2	3.50
500 4 1/4 x 4 1/4 x 1 1/2" Beeway No. 1	5.75

## Foundation

10-sheets-to-the-pound SPECIAL	
10 sheets 7 7/8 x 16 1/2"	\$0.60
50 sheets 7 7/8 x 16 1/2"	2.70

All the above is good, clean stock of first-class workmanship and material.

A. H. Rusch & Son Co.  
Reedsburg, Wisconsin

## Practical Tomato Culture

By  
FRANK C. PELLETT  
and MELVIN A. PELLETT

An attractive cloth-bound book giving full information concerning the cultivation and marketing of tomatoes in the field or under glass.

That chapter relating to forcing tomatoes in the open field by staking and pruning is alone worth the price of the book. The most money is made by growing tomatoes for the early market, while price is high.

This book is the story of practical experience of Melvin Pellett, junior author, who is a market gardener and fruit grower. Price \$1.50, postpaid

AMERICAN BEE JOURNAL, HAMILTON, ILLINOIS

## Queens

Untested queens:  
45 cents each; ten, \$4.25; one hundred, \$40.00.

Tested queens:  
50 cents each more per queen.

Pure bred Carniolan and Caucasian Queens.

Write for prices.

## Remainder of Season Prices

Pure Italian Bees and Queens. Unsurpassed Quality. Prompt Shipments. Safe arrival and complete satisfaction guaranteed.

2-lb. pkg. bees with queens, \$2.00 each, any number  
3-lb. pkg. bees with queens, \$2.50 each, any number

York Bee Company, Jesup, Georgia

Lewis Beeware &  
Dadant's Foundation at Catalog Prices.

## *The POSTSCRIPT*

### GOSSIP ABOUT THE OFFICE IN THE MAKING OF THE MAGAZINE

#### Beekeeper Gets Damages

An interesting story is told in the late news dispatches of an Iowa beekeeper who secured a judgment for \$700 in District Court against another beekeeper who sold him bees which were diseased. Here is something new. The bees were sold for \$550, but because the buyer thus brought disease to his healthy colonies he was given judgment for more than the entire purchase price of the outfit.

With this precedent established, every beekeeper who sells bees in future should have a definite contract to the effect that the buyer takes his own chances regarding disease. This decision will help the campaign for burning diseased colonies. If the seller is responsible for damages for the spread of disease, it will be much cheaper to destroy the outfit than to take chances.

#### Better Days Ahead

The writer recently took a trip of several hundred miles through nearby territory. The most optimistic man met on the entire trip was a farmer. He said that he would not be surprised at 25-cent corn next fall, and he has more than a hundred acres planted to corn. He said that we must get used to doing more work for less pay, doing without some things that we would like to have and living on a more economic scale in future. Yet he ventured the opinion that the farmer, who is not too heavily in debt, is in better shape than most other folks just now.

Falling prices make the dollar go farther, even though the dollars are hard to get. This man said that he was not discouraged with his lot, that he intended to stay with the game, and looked forward to making substantial progress as we get accustomed to the new order of things with which we must contend.

#### Publicity

In a letter to the writer, J. W. Stine, in commenting on the articles on the races of bees, says that had the Caucasians received as much publicity as the Italians there would be a very different story to tell. This is an interesting speculation and makes one wonder just how much of the popularity of the Italian race is due to the favorable publicity it has received. The question arises, however, as to whether it has received so much favorable publicity because it is a better race. Many of the leaders in the industry have been vigorous champions of Italian bees.

#### Tells the Kids

G. W. Mapus, of Clyde, Ohio, is in demand as a speaker on bees. He has appeared in many of the Cleveland schools, much to the interest of the children. A recent issue of the Plain Dealer published a picture of Mapus and his observation hive with a group of the children. This kind of work builds goodwill for the industry. He has recently spoken to the pupils of eleven schools with 252 teachers.

#### Swarms

When swarming time comes, we all wish to be out with the bees. Our modern system of beekeeping does away with the excessive swarming which was so common in the days of let-alone beekeeping. Cale talks about swarm prevention (page 326), which is essential to profit in the apiary, but I can't forget the excitement in grandfather's apiary forty years ago when about a dozen colonies would decide to swarm at one time. In the "Honeybee," Langstroth tells of sixty-one swarms in one day, and that beats my best story.

#### More Bears

F. M. Baldwin gets me all excited by his story of the wild country down in Georgia. He had better be cautious how he writes such stories as those on page 332, or he may have a whole string of us northern bee men fishing in his creek. Since Wilder took me to see Hamp Mizelle in the Okefenokee Swamp, I have been itching to go back

again and get better acquainted with those bears and alligators.

#### Season's Prospects

That item about early honey in Florida, on page 333, is a sample coming from numerous localities. Our correspondence indicates that honey is being harvested from unusual sources in many places. A St. Louis beekeeper reports the bees working in the second super early in June, yet he says that the white clover in his locality was nearly all killed by last year's dry weather. Many report early honeydew, which is not so good, yet if it comes early in the season is better than having to feed the bees.

#### The "Best" Honey

Dodge sure hits the nail on the head in his article on page 319 when he says that consumers think of honey in terms of the flavor with which they were familiar in childhood. How well I remember the "Snow" apples, sometimes called "Fameuse," in grandfather's orchard. This is a very old variety which was grown in eastern Canada in the days when this western country was all wild prairie. Grandfather came from New England. How natural it was to plant the varieties which he had known in his former home! Somewhat the flavor of the Snow apple remains in my memory as the finest apple grown, simply because I ate it so freely under grandfather's trees when but a small boy. So it is with honey. It is hard to convince a man who was raised in the buckwheat regions of New York or Ontario that sweet clover or alfalfa honey is the best in quality.

#### Bees Still Pay

A vocational agriculture student, Amos Langston, of Waukulla County, Florida, showed a net profit of \$1,131.75 from one hundred colonies of bees last year. Although he sold his honey at a low price, still he made nearly a hundred dollars a month for the entire year, and went to school. It is doubtful whether any other agricultural activity can make any better showing. If a school boy can clear that much money, it is still possible for a well equipped beekeeper to make a good living in spite of slow markets. Compared to other lines of business, the beekeeper is in a favorable situation.

#### Air and Sunshine

It is sometimes embarrassing to get off the beaten path. I have formed the habit of going without a hat in warm weather, but when I go into a store someone is likely to mistake me for the proprietor or clerk. Business-like customers approach with an enquiry as to the price of cabbage or to ask me to wait on them quickly because they are in a hurry. A friend of mine who sometimes goes down town in his bare feet wears his hat and avoids such mistakes.

Two youngsters met in the alley. The first one says "I don't have to go to school today, because I caught cold..." The second one replies, "I don't either, because I caught a skunk."

#### Wrecks

A New Zealand beekeeper's vivid account of the wreck of his apiary when an earthquake shook down the hives piled with supers, broke the combs and tore things up generally, reminds me of an experience I once had with bees in a flood. He tells how frantic the bees were, and estimated that he and his assistant each received at least a thousand stings. The boy plunged into a tank of water to escape the torment and found that with wet clothes he suffered less punishment.

One who has not experienced the wreck of an apiary through some such disturbance as storm or flood can hardly realize what a mess it makes with a whole apiary turned topsy-turvy at once.

FRANK C. PELLETT.